Authentic

SCIENCE FICTION MONTHLY 1/6

No41

WE LAND ON PHOBOS —
— ARID MOON OF MARS!

This month's FEATURED NOVEL

The PHOENIX NEST

by Richard deMille

Short stories by: CHARLES ERIC MAINE J. F. BURKE
E. EVERETT EVANS FRANK QUATTROCCHI

VOLUME 1 No. 41
ONE SHILLING and SIXPENCE

Authentic

SCIENCE FICTION MONTHLY

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Printed in Great Britain and Published by Hamilton & Co. (Stafford) Ltd., 1 & 2 Melville Court, Goldhawk Rd., London W.12, England

As I promised you last month, this editorial is being written in England. I have come back from my most interesting 15,000 mile tour of the United States and Canada ready to scttle down to the task of making our magazine the best ever. It was gratifying to find that it had so large a following in the New World; there is no doubt that American fandom relishes the difference in style and approach that is typical of the best British science fiction. And *Authentic* was the only British science fiction magazine I saw on sale in the States and Canada.

I'm not suggesting that this is necessarily a good thing, except from the selfish point of view. It would please me considerably to see quite a few more British magazines selling in America—and over here! *Authentic* is now the only British magazine that comes out regularly enough and in large enough numbers to reach the masses; our closest rival has a circulation less than half of ours. So, it would seem, we are more or less alone in spreading wide the gospel of British science fiction. And doing anything alonc makcs it a lot harder.

From this standpoint, I'm rather pleased to see the recent introduction of British editions of some American science fiction magazines. This is a thorny point, and many people think the effect of these magazines will be disadvantageous to British science fiction. I strongly disagree. True, their introduction into the country will make us British editors look to our laurels—but we should have been doing that anyway. And if the competition from American magazines kills off some of the British products—it will be their fault, not that of the importations. British magazines have got to be good enough to withstand the pressure of foreign competition—indeed, they should *utilise* it rather than try to prevent it or bemoan it.

One thing is sure. *Authentic* will not die. We have no fear that American magazines will entice away our readers—because we give them what they want, what they ask for. And I feel that the influx of this foreign science fiction in large quantities will do a great deal to interest thousands of people who have never before tried the genre.

Now, let's plug the trumpets, mute the strings, and give some indication of our plans for the future. To begin with, I can't help mentioning the support we are getting from the publishers of this magazine. They have the cause

of British science fiction at heart and they have looked into their hearts and decided to put even more money into the production of *Authentic*. As you will see this month, I have been able to fill up *sixteen extra pages*, at no more cost to you. Each month, *Authentic* will have 160 pages, which, if you will permit me a little trumpet-toot, is considerably more than you get from any other British science fiction magazine—even at a higher price than ours. You will get more stories, more features, new competitions, increased projectile pages —all at no extra cost to you. Next, even though we've been paying the highest S.F. author rates in this country for some time, we are now raising them even higher, in the confident hope of getting the very best material from our writers.

What have we this month? A lead novel by Richard deMille gives us a refreshingly new treatment of the tissue culture plot. Richard is the up-and-coming author son of Cecil B. deMille, that great film personality. E. Everett Evans has a nice little game with the idea of levitation. Frank Quattrocchi stirs us to contemplation with his piece about children who are not as innocent as they seem. I mention these in this order because they are stories by American authors. I want you to know that they are all *original*. They have never been published before, and I bought them because I think they are more in the British tradition than the American. Was I wrong? You tell me.

British authors are well represented, too. I have very great pleasure in introducing to you our first Canadian author, Katherine Marcuse. Katherine, (her friends call her Kitty) does a regular science fiction radio programme in her homeland and is well-known across there for her sensitive stories of emotional conflict. We hope to have her again.

J. F. Burke is a name that's turning up frequently now. This month he gives us *The Censors*. Tell me if you like it. Charles Eric Maine, that highly successful British writer, returns to our pages with *Boogie Matrix*, a clever peep at future politics. Charles also gives us the long-awaited article on the changes made in the plot of his most successful creation, the play-book-film *Spaceways*.

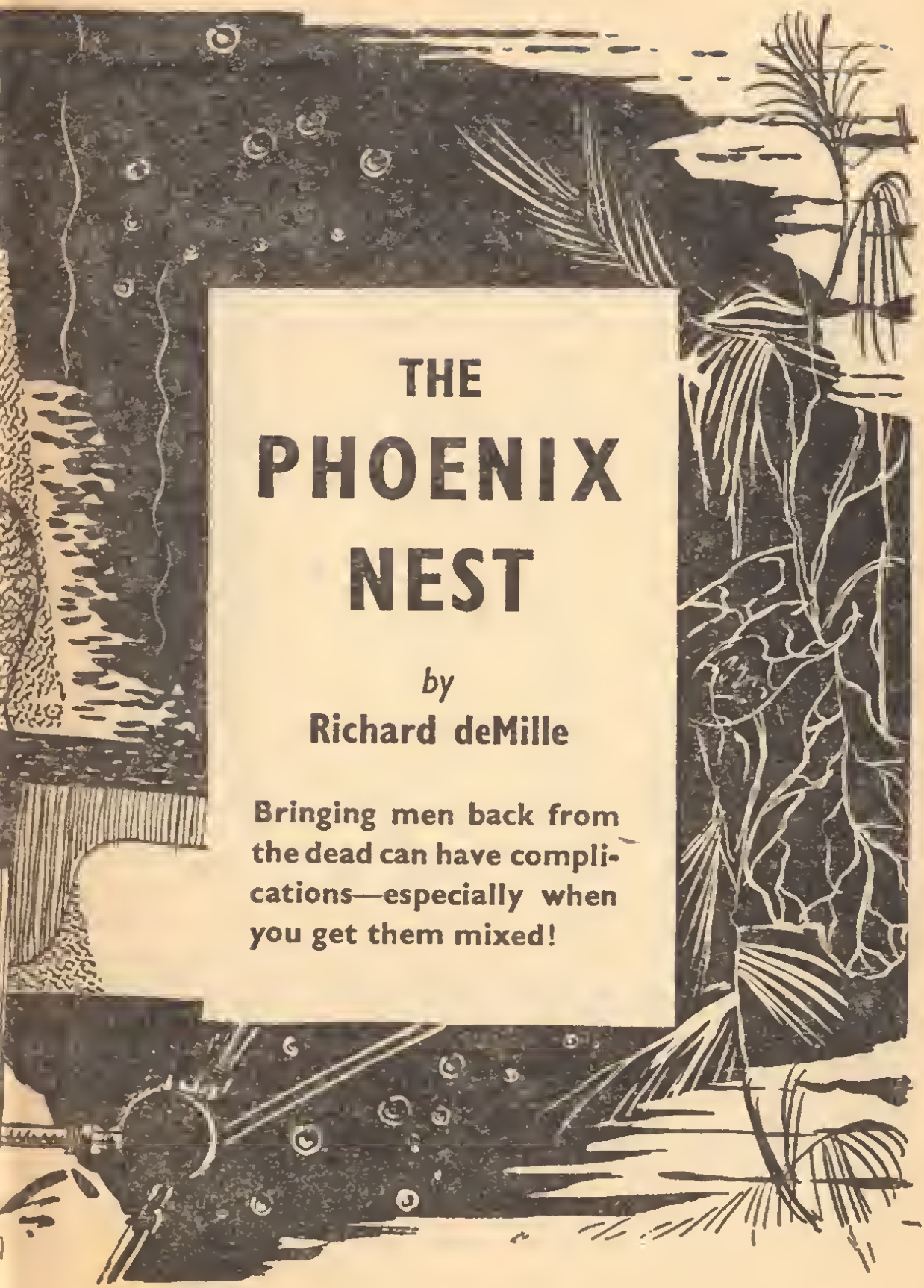
Then there's a film review—*Donovan's Brain*. I saw the advance showing of this when I was in Hollywood with Forrest Ackerman, and thought you'd like to hear about it.

You'll notice, too, that I've divided the book reviews into fiction and non-fiction sections. This is in response to multitudinous appeals for more notices of technical books. I hope to keep it that way.

So, there it is. Next month it will be even better. See you then.

H.J.C.

Illustrated by Davis



THE PHOENIX NEST

by

Richard deMille

Bringing men back from the dead can have complications—especially when you get them mixed!

Professor Knaut made the decision. Dr. Strothmeyer seconded it. The great day had arrived—the day upon which one of the world's most famous men, Sir Winston Churchill, would be duplicated and re-duplicated, upon the face of the earth, so that immortality might be proven once and for all and so that the services of one of the world's most noble statesmen not only might be regained for mankind, but also might be doubled in volume of output.

It had all begun back in the 1920's, when Harrison and Spemann had initiated their investigation of the startling embryological phenomena which were to grow into the new science of phœnixology. Spemann discovered the chemical "sculptor of life," which is known today as "genoplast." His pupil, Schotté, demonstrated the ability of certain simple life forms to reduplicate themselves almost completely, without benefit of either meiotic or mitotic reproduction. Phœnixology had been born.

Seventy years later, in the phœnix laboratory of United States University—known affectionately to its undergraduates as "Use-You"—two young Winston Churchills, grown from slivers of the body of the original Winston Churchill, lay ready for awakening.

It had been a long wait for old Winnie. Before he had passed away for the first time, at a great age, the delicate incision had been made. Two samples of his living protoplasm had been removed and immediately frozen to a temperature of eighty-eight degrees, Kelvin, and kept in sealed and icy glass for the many years that intervened between the death of the great statesman and the development of phœnixology to a point at which it was ready to begin the regeneration of human beings.

Countless thousands of experiments had been performed on animals. The phœnixologists began with various simple vertebrates, like salamanders, and worked their way up through guinea pigs, rats, rabbits, dogs and monkeys. In each case, a few cells were taken from the body of

the living animal. Then the chemical sculptor of life, or the nearest approach to it which laboratory skill could isolate, was applied to the still-living cells, in a warm nutrient bath. From this bath, called the phœnix nest, a new organism grew which was the exact duplicate of the old organism.

At first, of course, the experiments had failed. Cancerous and malignant monstrosities had grown within the nutrient baths instead of the graceful salamanders or likeable guinea pigs that were expected. Eventually, however, success began to reward the tireless efforts of the scientists. Guinea pigs began to grow in the tubes which resembled hair for hair and wart for wart the living animals from which the "parent" cells had been excised.

Regeneration of bodies from non-genetic cells was a proven fact. There remained only to be accomplished the extension of this process to the human organism and the demonstration that the personality was regenerated along with the body.

In the refrigerators of the University were cells from countless men and women who had been of outstanding service to their fellow men—and countless who had not. Among the first group were cells from the great of America, England, France, Italy, Germany, Japan, China, New Russia, India, the Scandinavian countries, the South American countries, Africa, Australia, and everywhere where a great reputation had flourished. Among the second group were millions upon millions of little tubes from millions upon millions of little people, who had put in their bid for immortality by donating a few cells of their bodies, marked with name, date, occupation, nationality and serial number.

Serial Number One had gone to Sir Winston Churchill, and it was he who was destined first to be regenerated—and not merely singly, but as twins.

There are those who say that guinea pigs have personality, but even if this be true, it was not true enough to show duplication of personality out

of the phœnix nest. The duplicate guinea pigs, likeable as they were, could not be shown to equal their prototypes in more than body. All guinea pigs are too much alike for that. Even dogs did not supply the necessary proof.

The researchers determined at last to attempt the duplication of a living human being. The first purpose of this would be, naturally, to demonstrate that a human being could be generated from cells in the same manner as salamanders, guinea pigs and dogs. But the second purpose would be to establish that, once generated, the human being would be the same person as the individual from whom the cells had been taken, having a personality which would be indistinguishable in every way from that of his forebear. Just what this would mean in cases in which the forebear was still alive was a difficult point.

When news of the experimental plans leaked out to the Press, a storm of protest burst forth from various religious groups, who said that it was a sin against God and man to force a human soul to split itself in two so as to become the tenant of two bodies. The experimenters responded soothingly that God moves in mysterious ways, His wonders to perform, and that if they could exactly duplicate a physical human being in the laboratory, God would cooperate by handling the spiritual end of things in His own divinely efficient manner.

The religionists were put off by this adroit use of their own arguments against themselves, and they subsided long enough for the University men to go ahead with the experiments.

If, however, the scientists had disposed of religious objections to the splitting of the human soul, they had not quieted all their own doubts. Long and heated discussions were carried on behind the locked laboratory doors. Professor Knaut, successor to the original experimenters, was strong for the idea that the human mind was nothing more than a series of electrical charges which passed in accordance with the natural laws of electronics through any organism as complex as the human body. Dr. Stroth-

meyer, his assistant, disagreed, saying that it was quite within the framework of the energy-propagation theory of Wetmore and Nicholas to suppose that the human mind was an integral, sub-atomic field, self-contained and self-perpetuating, and that its dependence upon an organism was neither complete nor continuous. The argument went round and round, while preparations were made and while the first duplicate body was growing—the test body which preceded Churchill. But both of the scientists knew that the end of the argument could come only with the awakening of the first duplicate man.

The "parent" was one Louis the Gimp, who was waiting in the Sing Sing death house. This fact was known only to the two scientists. They had chosen this course in order to simplify the legal problems which were implicit in the creation of a thoroughgoing doppleganger for a free citizen. The prisoner was soon to be executed. Should the duplicate be exact, he would be embarrassed by that fact for only a few weeks after his awakening.

Dr. Strothmeyer had objected to this plan, saying that public opinion might resent the creation of a new murderer to take the place of the old one, but Knaut quieted him with the reminder that since no birth certificate or registration of any kind existed for the duplicate murderer, he himself did not in fact exist and could be done away with, if the need arose, without illegality. Strothmeyer objected again that this raised the question of the rights of persons risen from the phœnix nests, but Knaut grunted that someone could cross that bridge when he came to it, and that it was not their worry anyway.

In due time, the duplicate was complete. They wakened him at the physical age of twenty-four, which was the exact age of the doomed man. They drained off the nutrient bath first. Then they subjected him to the waking ray and the fine streams of cold water. And he woke. As he opened his eyes, he was addressed by Professor Knaut.

"Welcome, sir!" said the professor. "By what name do you wish to be called?"

The new man looked dully about the laboratory. He shook his head as if to clear it and said: "*Pero, donde estoy? Que paso? Quienes son ustedes?*"

"He's confused," Knaut told Strothmeyer. "I'll try him again." He turned to the bewildered duplicate. "We are members of the faculty of the United States University. You have been duplicated from the cells of a living man. In every sense you are that man—except that you are not. We will help you adjust yourself to your new circumstances. Just tell us how you feel and what you want."

The duplicate's jaw dropped, as he made a terrible effort to understand what the professor was saying, but he answered nothing. Professor Knaut went on.

"Just to start the ball rolling, I will remind you that your name is Louis—Louis the Gimp—though I am not sure that the phœnix process transmits such detailed information from the old organism to the new." He looked expectantly at the duplicate, who wagged his jaw and began mumbling to himself.

"*Un momento estoy muriendo, en el hospital. El proximo, estoy aqui.*" He spoke directly to the two scientists, a note of pleading in his voice. "*No entiendo, senores. No entiendo nada! Me llamo Carlos Delgado. Favor de decirme donde estoy, senores!*"

Strothmeyer turned to Professor Knaut with ill-concealed delight at being proved right about the independence of the mind. "He says his name is Carlos Delgado, Professor, and he wants to know where he is. He says the last thing he can remember is being in the hospital, where he was dying."

Professor Knaut exploded. "Poppycock! Call the prison and find out if Louis the Gimp speaks—that language—whatever it is." He waved his hand at the duplicate.

"It's Spanish, Professor." Strothmeyer had to hand it to the old man for taking it so coolly. "I'll call the warden right away."

While Strothmeyer was on the telephone, Knaut attempted to bully Carlos Delgado into admitting that he was Louis the Gimp, but without success. Delgado grew more and more frantic in his appeals for information, as the professor talked to him more and more sternly.

When Strothmeyer returned, he said: "Louis the Gimp speaks bad English and worse Roumanian. There is no record of his ever saying a word to anyone in Spanish." He grinned at Professor Knaut.

If Strothmeyer thought he had the old man on the run, however, he had reckoned him too lightly. Knaut nodded dourly and said: "All right. Give him sedation—the B dosage."

Strothmeyer did not understand for a moment, and then his face froze in horror. "Oh, no! You can't do that, Professor. He has rights. I don't care if he isn't a citizen. He has rights."

"He has nothing!" snarled Knaut. "I made him right here in this laboratory, and I'll unmake him any time I feel like it. Administer sedation, Dr. Strothmeyer, and don't waste any more time about it."

Strothmeyer sighed and shrugged. He knew better than to argue with the old man. Associate professorships at U.S.U. paid well, and they were for life—with phœnixology, perhaps for ever. He had no desire to give up an eternity of job security merely to save the life of an immigrant, who would do better to be reborn in his own country. He went for the needle.

Carlos Delgado eyed Strothmeyer suspiciously. He had not lived in the last term of General Fulgencio Batista without learning something of the ways of men. His present unnatural tenancy of an artificial body, which had been nurtured with all the care of science and had suffered neither illness nor injury, made him more than equal to the average man in strength. His sudden transfer from one adult body to another had left him with considerable memory of the Cuban underworld and the dangers of submitting to the wishes of men whom one did not know

as well as the back of one's own hand.

As Strothmeyer came toward him with the hypodermic syringe, Delgado appeared to weaken and grow confused. He allowed the scientist to take his arm. Professor Knaut moved up to be of assistance.

"I think it will be all right, Professor," said Strothmeyer. He raised the needle.

Delgado struck with all the strength of his phœnix-nurtured free right arm. Strothmeyer received the blow full in the face and fell back against Knaut. By an odd freak of fortune, the needle, which he still held in his hand, pierced Knaut's upper arm and was partially discharged before the enraged professor could strike it down.

The sedative, which had been a lethal dose, took effect in a few seconds. Knaut did not even reach the door of the great laboratory. He sank down and passed into unconsciousness.

Strothmeyer was too groggy from the blow to rise from the floor for many minutes. When he did so, he found that Carlos Delgado had disappeared—along with Professor Knaut's suit, smock and shoes. Strothmeyer started towards the 'phone, to notify the authorities, but stopped, banishing the thought with a shudder. If he said that Louis the Gimp was at large, the authorities would only have to look in Louis' cell to see that the report was false. If he said that a duplicate body had escaped, under the guidance of an alien, the effect on the phœnix project might be disastrous. He could imagine, for example, what the alien-exclusion faction of Congress would say to this new form of illegal entry. And, generally, such bungling would bring universal public ridicule. It would be much better to say nothing.

When the dull ache of his bruised face had subsided a little, Strothmeyer began to realise how thoroughly Delgado had validated his ideas about the human soul, and how the ideas of Professor Knaut had been proved wrong. He glanced again at the still-unconscious professor and managed a painful smile. He

wished Delgado-Gimp good luck.

When Professor Knaut came to, hours later, he was furious. He did not speak to Strothmeyer, who explained as gently as possible that the duplicate man had escaped and why it would not be a good idea to try to get him back. The old man stumped sullenly about the laboratory, searching for another smock. Strothmeyer trailed after him, growing more and more apologetic.

When Professor Knaut had covered his frame to some degree, he left the laboratory, in bare feet, went to his private car in the basement car park and drove out of the building. Strothmeyer did not see him again for two days.

On the third day, the old man returned to the phœnix lab full of confidence. When Strothmeyer greeted him cautiously, he said, with a laugh: "My boy, every great research project has its little setbacks. But from these, we learn. The time has come now for us to take the big step. Our process is a success."

Strothmeyer opened his mouth to express relief that the professor was no longer upset by the escape of Delgado-Gimp, but Knaut was running under full steam. He cut his assistant off with a curt command.

"Bring the vials with the Churchill cells."

Strothmeyer hesitated. "Both of them, Professor?"

The old man gestured impatiently. "Of course, both of them! We must put them into the sculptor bath at once. Get them out."

Still Strothmeyer did not go to the refrigerator. "But I thought—after the results we got with Louis the——"

Suddenly red-faced, Knaut shouted at him: "You *thought? Doctor* Strothmeyer! You are my laboratory assistant. I do the thinking here." He glared at the younger man. "If you choose to misinterpret the results which I obtained in my first, *and completely successful*, experiment, at least do not allow your dullness to interfere with your duties. Bring the vials!" As Strothmeyer turned meekly to do the professor's bidding, the old man softened a little. "If you are

still confused, I will explain the results of the first experiment to you, fully, after we have Churchill One and Churchill Two immersed in the growing bath."

Strothmeyer wondered how the old man was going to explain away the obvious fact that Carlos Delgado was *not* Louis the Gimp, in anything more than bodily form, but he knew his superior too well to doubt that there would be an explanation, logically and forcefully expressed.

He was not disappointed. As the Churchill cells began to bubble comfortingly in their two preliminary nests, Knaut turned to him and said, kindly: "Doctor, sit down. I want to make this matter perfectly clear to you, so that you will not be handicapped in your work by notions which are totally outside the framework of true and valid science." Strothmeyer sat down on a stool, where he could keep an eye on the nests, and listened.

"In the first place," Knaut grasped the lapels of his smock and became the professor in the classroom, "the opinion that the human personality is independent of the human body—no matter how widely such an opinion may be held by preachers, politicians, so-called educators, psycho-quacks, Jungians and other fools—is an opinion which runs counter to every principle of true science. The development of organic life on this planet, from the merest speck in the newly formed sea, nearly a billion years ago, to the momentous experiment which we perform here today, in beginning the recreation and reduplication of Sir Winston Churchill from a few cells of a body long dead, is a development which brooks no nonsense about souls and spirits. If you, Doctor, had no knowledge of the origin of mankind except what you had read in the Bible, then I could understand your clinging to this superstitious notion of the existence of a mind without a body. But you are thoroughly and painfully familiar with evolution.

"You know twenty times as much about it as Darwin ever knew. You have seen it right here in this laboratory, thous-

ands of times. You have seen how a tiny organism develops from next to nothing, and how that organism exhibits a tiny intelligence which is proper to its simplicity and minute size. You have seen how other organisms develop from such tiny organisms, becoming larger and more complex, and how these larger organisms display greater and greater intelligence as they become more and more specialised and differentiated.

"Finally, in the last few days, you have seen the culmination of the creation of a living, breathing, thinking human being from a few cells which were no more capable of human thought than are the algæ in the sea. You have seen the duplication of a human being who is, at this moment, waiting in Sing Sing to be executed, so that now there are two of him. You have seen a miracle of science, whereby, even though Louis the Gimp will be executed next month, he will live on, after his original body has been incinerated and his name has been removed from the file of the living and placed in the file of the dead. You have seen a human being made immortal right before your eyes, and yet you doubt that the mind is an integral part of the organism. Really, Doctor, I am surprised at you."

Professor Knaut paused, conscious of the powerful effect of his rhetoric—rhetoric for which he was famous and by which he had persuaded many a reluctant official of University and government to go along with plans which were either incomprehensible or plainly distasteful.

Strothmeyer sat still, his head bowed beneath the weight of Professor Knaut's words. But even in the face of such authority, the seed of conviction put forth a feeble shoot. "Yes, Professor Knaut," he said, softly, "I know all that, and I agree with you——"

"Well, that's more like it!" The professor interrupted him.

"——But still," Strothmeyer went on, "when our new Louis the Gimp woke up, he spoke Spanish, and——"

"My dear boy!" Knaut put his hand affectionately on the shoulder of the wavering Strothmeyer. "I was just

coming to that. It is very simple. In fact, it is so simple that a young man like you, who has spent most of his life in a laboratory and has had little chance to knock about in the world, might overlook the obvious fact while looking for a much more complex and unlikely explanation. *Of course* Louis the Gimp spoke Spanish—or some language which you thought was Spanish. *Of course* he tried to deceive us. *Of course* he attacked us and escaped."

Professor Knaut looked straight into Strothmeyer's face, a gleam of triumph in his eye. "What *else* would a dangerous criminal like Louis the Gimp do? Would he sit down at the table with us and say: 'Well, now, gentlemen!'? Would he? No! Of course he wouldn't. He would behave just as he did behave. He would try every trick and stratagem which his twisted brain could manufacture to confuse and confound us. These actions of his, this mumbling of Spanish nonsense, this attack on you, this theft of my clothing—all this was the sort of behaviour which an examination of the known character of Louis the Gimp would clearly foretell. You thought that the experiment had failed." Professor Knaut shook his head good-naturedly. Strothmeyer, my boy, it has succeeded beyond our fondest hopes. We have proved everything we set out to prove."

The professor held his fingers up before Strothmeyer and ticked them off, one by one. "One—we have shown that a total organism can be re-created by our phœnix method. Two—we have shown that frozen animal cells react just as well, when thawed, as cells which are put into the nutritive bath while still warm from their parent body. Three—we have shown that a human organism can be exactly duplicated from cells. And four—with the recreation of Louis the Gimp, we have shown that the duplicate man is the same person, psychologically, as the original man."

The professor put his hands behind his back and threw out his meagre chest. "This means that we have conclusively and

scientifically demonstrated that immortality is possible. Through us, the mythical promise which is found in all religions and much pseudo-science, the promise of life after death, is at last fulfilled by the genius of man himself."

He paused momentarily and regarded Strothmeyer, drooping upon his stool. Then he continued in a matter-of-fact tone. "The only thing which remains unproven is the regeneration of a human being from cells which have been for many years in refrigeration."

Strothmeyer revived a little at the introduction of this familiar technical detail. "Wouldn't it have been safer, though," he ventured, "to wait with the Churchill cells until we had regenerated some less valuable person?"

"Time enough for that, my boy." Knaut rubbed his hands. "Don't forget, every week that we spend in experiment to assure the safe regeneration of the Churchill cells is a week during which those cells get older. There is a point of diminishing returns in this safety business. Our success with Louis the Gimp shows that we are no longer justified in waiting with Churchill."

He turned and viewed the nests, like a proud parent. "Churchill will grow there, as twins, until he is Young Churchill again—until he is thirty-five years old, anatomically. Then we will wake him."

"But that will take weeks longer," Strothmeyer objected. "Why don't we just bring him up to eighteen or nineteen?"

Knaut's face grew grave. "The world is in a mess, Strothmeyer. Here in our secluded laboratory we do not see the problems which society faces—the great feats of human engineering which will be needed for mankind to survive long enough to benefit by the work which we are just completing. We can help to solve those problems, and thus assure the perpetuation of our work, by bringing Sir Winston Churchill back with sufficient maturity to make him immediately a great force for good in the world." He looked earnestly at Strothmeyer. "If we brought him back as a mere youth, it would be years

before he would grow to great enough stature to influence the societies of the world. This way, he will be able, with a few months' education, to step from the laboratory into Parliament, or the Senate chamber—don't forget, he was part American. All we have to do is provide him with a suitable wardrobe."

The dreaminess into which Knaut had drifted was dispelled. He smiled archly at Strothmeyer. "Since I don't care to give up another of my suits to our work—even for Sir Winston's sake—I want you to look up his exact measurements in the file and have two good blue suits made for him at the best tailor's you can find. We want to do this thing properly!"

Professor Knaut winked at the astonished Strothmeyer and strode from the laboratory, whistling "Rule Britannia!"

In the months that followed, the twin Churchills took form in their milky baths and grew. First, they were tiny collections of cells, having no recognisable character. Then, through successive stages which paralleled the evolution of the human body through hundreds of millions of years, emerged a figure familiar to anyone who was versed in the history of the Western World during the first half of the twentieth century.

He lay—or rather, they lay—with the dignity and splendour of sleeping gods. The young Churchill, reborn and renurtured to the robust and masterful age of thirty-one years. As the process neared completion, in the later months, many adjustments had to be made. The care and feeding of the bodies had to be modified. The unawakened organisms could do nothing for themselves, although they had passed the pre-natal and childhood stages very quickly.

When maturity began to approach, the scientists had found it necessary frequently to cut the Churchills' hair and remove their beards, in order to prevent a profuse growth of hair from interfering with the free flow of liquids within the nests.

The two Churchills were still receiving nutrition through their omfali—which was the

phœnix-nest equivalent of the natural umbilical cord. Animal experiments had showed that the severing of this cord was very likely to start the breathing process. This would have made it necessary to raise the heads of the growing organisms out of their baths, or to attach air hoses to their mouths. The first course would have nullified much of the massaging and circulatory effect of the baths. The second would have been risky, due to the frequent spontaneous movements which the organisms made which might have dislodged the hoses and allowed water to enter the lungs of the young statesmen.

Furthermore, the beginning of the breathing process was, in every animal form, a sign of self-assertion, a sign that the organism was ready to undertake an independent existence. It was inseparable from birth, or awakening. If the new Churchills had been allowed to breathe, they would almost certainly have awakened. Having awakened, they would undoubtedly have found their existence within the nests unbearably claustrophobic. They might even have injured themselves in trying to break out of the nests.

Strothmeyer, of course, had a further reason for wanting to put off the awakening to the last possible moment. He was not a brave man. He did not want the chips to fall where they might. He liked orderly and unexciting progress. The affair of Carlos Delgado had convinced Strothmeyer that orderly and unexciting progress was the last thing that was likely to result from the waking of the two Churchills.

In spite of his outward capitulation to the iron will of Professor Knaut, Strothmeyer still harboured a view of immortality which was largely non-materialistic. He was sure, beyond any doubt, that the person who had animated the duplicate body of Louis the Gimp had no more been Louis himself, or some extension of Louis, than it had been John Wilkes Booth or Ludwig von Beethoven.

Looking in through the glass walls of the phœnix nests, he could hardly doubt that sci-

ence had achieved the ability to duplicate and reduplicate the human body. But he was equally sure that this duplication had nothing whatsoever to do with personality. The chance that either of these two duplicates would be Sir Winston Churchill come back to life was, he thought, infinitesimal. The chance that *both* the new organisms would be Churchill was, by the integral-field theory of non-material mind, totally absent.

If, as Strothmeyer believed, the human mind was a field of energy not truly dependent upon an organism, then Churchill still existed, somehow, as an individual. He might conceivably become attracted to a new body which so exactly resembled his old one. He might, if he were able, take the opportunity to enter one of these new bodies at its awakening. But it would be far-fetched to expect him to enter both of them.

As Strothmeyer attended the Churchills, adjusting the controls and the nutritional, pressive and circulatory valves, and replenishing supplies, he had many weeks in which to cogitate these matters. He could not, of course, breathe a word of his thoughts to Professor Knaut, who might have thrown him off the project for such continued theoretical defection. But Strothmeyer could peer in through the glass and wonder.

The lights within the nests glowed warmly upon the super-healthy skins of the two duplicates, as they turned slightly in their controlling webs and went through their natural cycles of alimentation with the dormant dignity of impersonalised puppets. Clearly, they were not human beings. Not yet. They were only human bodies. Something was still missing from them. Something which, in a mysterious and wonderful way, would be added to them when they were awakened. What that something was, Strothmeyer knew only vaguely. But he felt that he did know. It was his deep conviction that he had the true approach to the human mind and that Professor Knaut had the false approach.

This something might be called a soul. It might be

called a field. It might be called an essence. But, whatever it might be called, it was not now present in the two Churchills, and it was not going to be generated by the pulsing, mindless dolls which had been grown in the laboratory from a few cells. It would come from another quarter entirely.

The frightened but clearly intelligible words of Carlos Delgado had proved that. "*One minute I am dying. The next minute I am here. My name is Carlos Delgado. Please tell me where I am.*" These were not thoughts which could have been generated by cells from Louis the Gimp. They were from another country and another person.

Strothmeyer shook his head. It was a deep mystery, but one that had to be fathomed. He checked the circulation rate of Churchill One, then crossed to the Churchill Two panel and equalised the rate there. The two Churchills were to have as nearly the same environment as possible.

Professor Knaut was not in the laboratory a great deal during Strothmeyer's tours of duty. This was inevitable, since no outsider could be trusted to tend the two Churchills, and the scientists had to sleep some time. Strothmeyer had brought a bed into the laboratory, and he frequently slept there, where he could see the duplicates merely by turning his head.

Alone in the laboratory for many hours of the day and night, Strothmeyer had a lot of time for thinking. One of the things he thought about was Carlos Delgado. He wondered how Carlos was managing, a stranger in a strange land. For several weeks running he placed advertisements in *La Prensa*, the Spanish-language newspaper in New York, thinking that the most likely place for Carlos to have gone. He offered Carlos assistance and asked him to write or 'phone, but it was no use. Carlos had disappeared.

Then, toward the end of the duplicates' gestation, a newspaper story put an end to Strothmeyer's search. It was only a small headline, since Louis the Gimp had been only a small-time criminal. It said:

"Twin of Gimp killed in Third-Avenue Hold Up. Surprise double surprised. Cop fries dark-horse desperado." The next day, gossip columnist Harley Schnorkel appeared on the laboratory telescreen with a rumour that police were baffled by the resemblance, even to fingerprints, between the dead Louis and his unknown twin. Schnorkel hinted at corruption at Sing Sing and suggested that many other supposedly executed criminals might still be at large, having bought themselves new lives with ill-gotten money. He said this might be the underworld version of the famous, but still unsuccessful, phœnix project, at U.S.U., and he laughed unpleasantly.

Strothmeyer would have liked to laugh, too, at the irony of the situation, but he was depressed at the loss of Carlos, who had been his only real clue to the nature of immortality. Though saddened, however, he did not lose his certainty of rightness, and he looked forward to the waking of the two Churchills with a mixture of brooding and excitement.

Suppose the mind of Sir Winston Churchill—having passed through the apparently unavoidable memory loss which accompanied rebirth and childhood helplessness—were now inhabiting some strong, young body. If Churchill were now living as a healthy and happy John Jones, or Nigel Smithers, or Pierre DuChambres, he would surely have no reason to enter either of the new bodies. But if he were disembodied or, like Carlos Delgado, sick and dying, he might very well be drawn, as by a magnet, to one of these capable, familiar forms, rather than to a helpless, pitiable infant body.

And what of memory? If the soul did not dissolve and dissipate, why did it forget nearly all of its past history? Why did former lives shrink to mere flashes of intuition or the common feeling that one had "been here before"? What was the cause of this amnesia?

The current of his thoughts made Strothmeyer's pulse race. He felt that he was getting close to the centre of the mystery. Standing by the window of the lab and gazing

vacantly at the University grounds, he drew the soundest analogy of which his highly trained mind was capable.

What was amnesia? It was loss of memory, loss of identity. What caused it? It was caused by an emotional or physical shock. What emotional or physical shock more severe than those of death and subsequent rebirth! As a theory, it made sense! Strothmeyer's knuckles whitened, gripping the window frame. His eyes were shining.

If the ignorance of an infant was no more than amnesia, then immortality was true! And it had always been true! A new-born human was an amnesia victim, transplanted to a strange environment, and so, unlikely to remember his former identity. But if the mind should return to a familiar body, like a battle-neurotic coming back to his home town, might not memory return and immortality become conscious? If Churchill One should attract the mind of the true Winston Churchill, might not that mind be wakened to full memory by its familiar physiological surroundings?

Strothmeyer began to realise that the awakening of the two Churchills might demonstrate immortality in a way that Professor Knaut could not even envisage. Then he, Strothmeyer, would be the true discoverer of immortality. He stared out over the campus, not seeing the metal and stone figures of presidents, educators, soldiers and scientists, but seeing himself walking on the checkered walks, a hundred years in the future. He saw Strothmeyer Two, or Strothmeyer Three, the discoverer of true immortality, the man who had combined the body and the mind, the man who saw great promise in the experiments of Knaut and his predecessors, but saw also that they were missing a most important point—the fact that the new body does not *recreate* the mind but is a magnet for the mind; that it draws the mind out of some other body, or out of space, and wakes it again to memory of its former identity, just as an amnesia victim may be

wakened by coming home after long absence.

Of course, Strothmeyer conceded, the amnesia victim does not always wake upon coming home. Sometimes the shock has been so great that he can look into the face of his wife or child and remember nothing. Strothmeyer sighed, his enthusiasm waning. There were many hazards, many unknowns.

Of one thing he was sure, however. Even though one of the Churchill bodies might attract Churchill himself, the other body, for that very reason, would not. But it would attract someone. And who would that someone be?

The odd notion occurred to Strothmeyer that it might be someone who had known Churchill, some former friend or associate—perhaps even some former enemy. He smiled. That would be unlikely. The chances against it were overwhelming. Still, somehow, it seemed a possibility to him.

If such a thing should happen, the true Churchill would have a considerable advantage over the false one, through being in a familiar, and therefore easily co-ordinated, body. The false Churchill might have difficulty with both memory and operation of his new body.

If the experiment should prove successful to this degree, Strothmeyer would be the only one who would know how to interpret the fact correctly, because he was the only one who had a theory broad enough to include all the facts—a theory which dealt with both mind and body. He turned from the window, rubbing his hands.

Professor Knaut entered the laboratory. "How are they coming, Strothmeyer?" he asked, hardly glancing at his assistant. He crossed directly to the nests and peered in.

Strothmeyer came up behind him, mumbling soothing phrases of little meaning. He knew the professor was not listening to him anyway, and his head was too full of the great possibilities in his future for much sense to come out of his mouth on any other subject.

Knaut turned, interrupting him. "Yes, yes. That is fine.

You have done a good job. What are their equivalent ages now?"

Strothmeyer had made the calculation that morning. Allowing for the lapse of a few hours, he said: "Thirty-four years and three months, Professor—according to my calculations." He smiled in self deprecation.

Knaut grunted. "I'll accept that. We won't wait any longer. Tomorrow is the day." Strothmeyer felt a surge of excitement and opened his mouth to speak, but Knaut cut him off. "Are the suits ready?"

"Yes, sir. All ready."

"You have the shirts, underwear, socks, shoes, scarves and gloves?"

"Yes, Professor. Everything."

"Good!" Knaut squinted into the distance, as if searching for some article of clothing which might have been forgotten. "We have been preparing for so many years! And still, I always feel that I may have forgotten something."

Strothmeyer suppressed a smile, knowing that he could never tell his superior what he knew was the forgotten element. Instead, he said: "I have great confidence, Professor, that the experiment will be a success."

Knaut looked at him sternly, with the appreciation which a battle captain shows a noncom who has proved reliable. "Thank you, Strothmeyer," he said. "I am sure you know how important the outcome is to me."

The great day was come, the day upon which Sir Winston Churchill would become twin new Churchills, to serve mankind and glorify the name of Knaut and, by reflection, of Strothmeyer. Professor Knaut was nervous, but he covered his nervousness with a brusque manner. Dr. Strothmeyer, on the other hand, felt a strange calm. He was like a magician's assistant who has substituted a platypus for the usual rabbit in the hat and who waits to see the magician just as surprised as the audience at the emergence of the unexpected beast. In this case, however, the audience was imaginary.

The two scientists had discussed the advisability of in-

viting other members of the faculty into the lab for the waking of the two Churchills, and they had decided against it. Without witnesses, if an accident happened, it could be explained later in a manner consistent with the dignity of the project. On the other hand, a brilliant success would be no less appreciated because of secrecy. Glory would shower plentifully when the two duplicates were exhibited.

At the precise moment of twelve noon, Professor Knaut nodded to Dr. Strothmeyer, who started the draining pumps. The liquid in the glass vats sank rapidly, and the two bodies came to rest in their supporting webs. Then the sides of the nests were swung down, and the omfali were cut and tied off. Having severed the connection between the organisms and the machines which nurtured them, the scientists turned on the rays which would disturb the electrical fields of the organisms and, thus, wake them. As a mild added shock, thin streams of cold water were sent over the inert young forms, which lay like summer sleepers in strange hammocks.

Churchill One reacted first. His fists came up, and his whole body twitched. He began to breathe great gulps of air. His eyes opened, and he stared at the ceiling with a look of wild surmise.

Churchill Two remained unmoving. Strothmeyer pressed a stud on his control panel, and the web which held Churchill Two began to shake and bounce its burden of living but unawakened man.

Churchill One struggled to a sitting position, from which he could see his hosts. He blinked his eyes at them. His mouth worked, but no words came out of it.

Churchill Two still had not responded. Knaut looked over at him and barked at Strothmeyer: "Increase it, man! Increase it! He'll die if he doesn't start breathing soon!"

Strothmeyer advanced the control. The web jerked and heaved violently. Churchill Two all but flew out of the nest onto the hard floor of the laboratory. Strothmeyer ran

up to the side of the nest to prevent this, and Knaut crossed quickly to Strothmeyer's control panel, leaving the now scowling Churchill One to fend for himself.

The web bounced and smacked against the naked back of Churchill Two. The ray projector hummed. The scientists stood like frantic posts, waiting for the first breath, but still it did not come.

"I'm afraid he isn't going to wake, Professor!" Strothmeyer gasped.

"He's got to wake!" Knaut snarled. "I'm depending on it!" He pressed the cold water stud all the way in and held it. A frigid shower struck Churchill Two and sprayed Strothmeyer on the rebound.

Churchill Two opened his mouth and said: "Ach!" He began to breathe—with more difficulty than his twin, but successfully, nevertheless.

Strothmeyer shouted: "We've done it! We've done it!" He jumped up and down in his excitement. Knaut neutralised the board, and Churchill Two settled down into more natural efforts, as the bouncing stopped, and began to breathe deeply and regularly.

Knaut rushed to the nest and peered down at him. His eyes were open. When Knaut leaned over him, he looked back at the professor suspiciously. He allowed the scientists to turn him to a sitting position, but then he seemed faint and unable to sit up. They lifted him out of the nest and carried him to the bed, where they covered him with a blanket.

Knaut took his pulse. "He's not taking it too well," he said to Strothmeyer. Churchill Two's eyes were closed again, and he seemed to have lost consciousness. Knaut was about to examine him further, when a strange, and yet familiar, voice sounded behind the scientists.

They had become so absorbed in bringing Churchill Two into the world that they had forgotten the better-coordinated Churchill One. They turned together, hearing not his words but only the wondrous fact that he had spoken.

He stood before them, a British Adam, young, robust,

and undismayed. Seeing their amazement, he spoke again, the tone and measured words matching the old recordings which the scientists had heard so often.

"Gentlemen, I congratulate you!" It was the commander of the fleet addressing his admirals after they had sunk the enemy to the last raft and rowboat. "I admit, with due humility, that when—many years ago, it must have been—I left part of my body with you for your experimental use, I had little confidence in the soundness of your theories. Now," he turned slightly and viewed himself in a polished metal surface which protected delicate instruments, "I cannot say you nay without in the same breath declaring myself non-existent—ah, which I have no wish to do!" He turned back to the scientists, and on his face was that slight, wry smile for which he had been so famous.

Professor Knaut opened his mouth to make suitable reply to the great man who stood before him, reborn, but Churchill had not finished speaking. "If memory serves," he went on, "there was talk at that time of bringing me back as twins. Such an idea, I must say, seems quite unreal to me. I find it impossible to conceive the exact nature of such a phenomenon. Nevertheless, I should like very much to know how that phase of the experiment came off." He looked toward the bed where Churchill Two was lying, still unconscious. "Since that chap over there, from the little I could see of him as you carried him across the room, bears a remarkable resemblance to me, I assume that he is the other half of the experiment." He paused expectantly.

Knaut and Strothmeyer stood aside automatically, so that Churchill One could approach the bed. He did so, and stood looking down at his counterpart. Churchill Two lay with flushed face, his eyes closed, his brow knit. He breathed heavily. Churchill One regarded him long and quietly. Then he turned to Knaut and Strothmeyer.

"The body is like my body," he said. "But I am I, and he is he. I have my thoughts, and I am sure he must have his,

different thoughts." Churchill raised his head and contemplated the vistas of his past. He spoke out of the long-dead years. "I have great memories! Memories of glory and of sorrow, of achievement and of struggle. I remember the Boers, the Battle of Britain, the defeat of Hitler, coronation of Queen Elizabeth, the dropping of the atom bomb. I remember happy times with friends and family. I remember the crash of waves, the hiss of surf, the feel of a paint brush in my hand." He looked down at Churchill Two again. "I remember all these things. Will he remember them, too?" He extended his hand toward the duplicate, who stirred beneath the gesture.

Professor Knaut saw a chance to assert his rightful position, and he said: "We have not yet spoken with your twin, Sir Winston, and so we don't know what, if anything, he will remember of his—and your—past. Frankly, I am surprised at the completeness of your memory—at the wealth of detail which can be carried through the years in a few cells, frozen in a glass tube. The power of the chemical sculptor to generate the mind from a few simple life units has by far surpassed my highest hopes."

Churchill stared evenly at the professor. "I wonder, since our friend here is not yet ready to speak to us, if I might take this chance to find some clothing for myself."

This request re-animated the two scientists, so that they spoke at once. Strothmeyer said: "We have them ready!" Knaut said: "I have provided them."

Churchill One was conducted to the next room, given his clothing, and left to dress, on the excuse of courtesy. Actually, both scientists were anxious to get back to Churchill Two—Knaut to prove that he was the same as Churchill One, Strothmeyer to prove that he was not.

"We must wake him, if we can," said Knaut, after closing the door on Churchill One. "I am sure he will remember the same things."

"He has reacted differently, so far," Strothmeyer objected.

"That doesn't mean anything. It's just some differ-

ence in the nest environment which we were not thorough enough to prevent—some difference of pressure or temperature or nutritional mixture or sculptor strength." He glared accusingly at Strothmeyer.

"But, Professor," Strothmeyer defended himself, "we checked everything carefully. The tolerance of difference was infinitesimal."

"Nevertheless, we missed something!" They were standing over Churchill Two. "I felt all along that something was being left out. I told you that before. Now we will just have to correct it as well as we can."

Knaut had picked up Churchill Two's hand, to take his pulse again. Suddenly the hand was withdrawn from him. Churchill Two opened his eyes. He sat up, quickly but unsteadily. He looked at the scientists, like a beast at hunters. Strothmeyer could not avoid the memory of Delgado's similar look.

"There is nothing to worry about," said the professor. "You are out of danger now. Your twin responded sooner than you did, but you are doing very well. Some little difference in your nest was responsible, but you will make it up in no time."

The duplicate's eyes bored into Professor Knaut. He said, at last: "You speak English!" His speech was odd, not at all like that of Churchill One.

"Yes, of course!" Knaut beamed. "We haven't changed that much in so few years. I am Professor Knaut. You are in the phœnix laboratory, of the United States University. Perhaps you will recall that you gave your cells, some years ago——"

"Cells?" Churchill Two grasped at the word.

"Yes," continued Knaut, "cells—so that we might regenerate you and bring you back to life years later, here in the laboratory."

"Oh." Churchill Two seemed disappointed. "Cells of the body." He grunted and nodded his head. "You are doctors," he said.

"We are phœnixologists!" Strothmeyer exclaimed. "And you, and your twin, are the first men—officially—to be

reborn from the phœnix nest."

Knaut shot Strothmeyer a heavy look and then took up the explanation. "You have been reborn from your cells. You have a chance to live again," he told Churchill Two.

A look of even deeper distrust crossed the duplicate's face. "Where did you get my cells?"

"Why, you gave them!" Knaut was taken aback.

Churchill Two drew his legs in and edged away from the scientists. "You are Americans." He spoke with obvious distaste.

"Yes, that's right," Strothmeyer put in. "We are Americans."

"And I gave you my cells?" Churchill Two shook his head in disbelief and reproach.

Knaut affected joviality. "That you did, sir! That you did! Don't forget, you are part-American yourself."

Churchill Two's sullenness flashed into anger. "I am what!" He half rose. "What did you call me?"

Knaut saw that he would have to humour the obviously damaged twin. "Well, that is just a little joke we have——" He interrupted himself. "But let me show you how well we have duplicated your body."

Churchill Two looked about the laboratory, as if to find the body which Knaut had offered to show him.

"Just come over here." Knaut stepped to a panel which hid a mirror, and slid it back. "Look at yourself in this mirror. Dr. Strothmeyer will help you to rise and walk."

Strothmeyer started to take the duplicate's arm, but his help was rudely refused. "Let go!" Churchill Two growled. "I can do it alone." He got to his feet, and Strothmeyer could see by the way he moved that he was gaining strength.

As Churchill Two walked stiffly toward the mirror, Knaut said to him: "When you see how exactly like yourself you look and how well and healthy, you will feel better about us, I am sure."

The duplicate stopped and turned to face the mirror. Knaut was about to say: "There! You see?" But the words never came out. Churchill Two had frozen, and horror burst from his face. He looked down at his body

and then back at the mirror. He moved from side to side and watched his reflection move with him. Then he turned upon Knaut, and spoke with shaking but icy voice.

"Is this your perverted idea of a joke, Herr Doktor?"

"Why——" Knaut gasped. "It—I mean—you look exactly like——"

"Like a young Winston Churchill!" the duplicate snarled.

A perplexed and sickly look came into Knaut's face. Strothmeyer stood, holding his breath. "B-but," stuttered Knaut, "who else would you want to look like?"

Churchill Two's hand closed on a kilogram weight which had been left, inadvertently, on the table. "There is no one I want to look like but myself," he said, through clenched teeth. Knaut backed away from him, pale as a ghost. Fearing for the mirror, Strothmeyer moved cautiously to slide the panel back across it. Churchill Two still looked straight at Knaut. "But," he continued, "of all the people in the world I would hate to resemble, Winston Churchill is at the top of the list!" His arm tensed, and the kilo tipped on the table top.

Strothmeyer closed the panel with a click. Churchill Two spun toward the noise, but at that moment the door to the other room opened, and there stood Churchill One, smiling broadly, in full array.

Churchill Two hurled the kilo at him with a cry of rage.

The kilo struck Churchill One full on the forehead, and he fell like a stone. Strothmeyer wailed in despair and ran to help him. Churchill Two squared his shoulders and looked about him in wary triumph. Professor Knaut half leaned and half lay across the table, his face drawn, his lips blue.

Strothmeyer laboured over Churchill One, but there was no response. The brass weight had struck squarely and with the full force of Churchill Two's maniac strength. He who had waited forty years to resume his identity was already deprived of it again. The blow had been fatal. Churchill One was dead.

Strothmeyer shook his head and sobbed. "It's no use!" he said. "It's no use!"

Professor Knaut uttered a feeble cry and stumbled toward the bed, his right arm and leg barely responding to his will. Strothmeyer watched him go, without feeling. Then he remembered Churchill Two, who stood confused but defiant.

"Who are you?" Strothmeyer demanded of him. "And why did you do that?" He pointed to the dead Churchill.

Churchill Two regarded him in hostile appraisal, and then, as though he were well used to such manœuvres, took the offensive. "What do you mean, who am I? You stole my cells. You kept them. You made them grow. You brought me to life again, to live as your prisoner. You must have known who I was before you altered me to look like Churchill—just as you altered that poor unfortunate, whoever he is." He pointed to the dead body. "Who are you to question me? It is I who question you! What is this perverted, decadent craze for making everyone look like Churchill? Why couldn't you leave me as I was? If you wanted to make sport of me, I would have been much more fun for you in my original form. How can your schoolchildren—if you still have schools—laugh at me when they think I am their false god, Churchill?" Churchill Two laughed bitterly. "Your clever joke has turned against you, my stupid Herr Doktor!"

Strothmeyer glanced from the raging Churchill Two, who resembled nothing so much as a vengeful prosecuting attorney in an unfair trial, to the noble, quiescent features of the dead Churchill. He wanted to weep, that the wrong one had been killed. Then an odd idea began to take form in his mind. He tried to soothe Churchill Two, to gain time to think.

"Perhaps," he said, "if you can tell me who you are, I may be able to alter your appearance to one that will be more acceptable to you." This was a bold lie, but Strothmeyer was desperate. If all he had to show for his years of labour was Churchill Two, it would be worse than no Churchill at all. He elaborated, hoping that the duplicate would swallow a big lie more easily

than a little one. He gestured confidently toward the formidable equipment in the laboratory. "The phœnix nest," he said, "has remarkable power to alter the human organism—as you have seen, in your own case. In a few more hours, in the machine, your face could be altered so that you would look quite different. If you will tell me how you want to look, I may be able to set the controls to achieve what you desire."

Churchill Two glared at Strothmeyer in uncertainty. "Can you really do this?" he said.

"We made you look like Churchill, didn't we?" The duplicate's fists clenched, and Strothmeyer hurried on. "So, we can make you look the way you used to look—uh, mister —uh . . ." Strothmeyer waited for Churchill Two to supply the name, while herding him toward the phœnix nest.

The answer dripped disgust. "That is just the sort of carelessness I would expect from a sycophantic servant of decadent democracy. You don't even remember my name. Perhaps you even forgot to record it when you stole my cells from our life regeneration laboratory in Berlin. Oh, we were far ahead of you in Germany." Churchill Two began to climb into the nest. "First you stole our method. Then, by some diabolical trick, you stole my cells." A new train of thought seemed to strike him. "Tell me. Is this already the twenty-first century?"

"Almost," Strothmeyer said, closing the side of the nest and locking it in place.

Churchill Two poked his head over the top of the nest and said: "Has there been another war yet? Who is winning?"

Strothmeyer moved toward the control panel, glad that the conversation was taking a turn which would keep Churchill Two's mind off his immediate circumstances. All Strothmeyer needed was a few moments to warm the equipment. He flipped the main switch, and turned the dial of the waking ray to "full," which was many times the waking dosage. The waves which had gently waked

Churchill Two would soon put him back to sleep with invisible violence, if only he would stay in the nest long enough.

"What are you doing?" Churchill Two asked.

"I have to warm the equipment before I can make the measurements," Strothmeyer lied. He became conscious that Professor Knaut was gasping horribly on the bed, but dared not look away from Churchill Two. "What do you mean, 'Who is winning'?" he asked, checking his controls over and over.

Churchill Two sneered. "Don't act the fool with me, Herr Doktor. You know perfectly well what I mean. Like my cells, before me, I am your captive. You won't lose anything by telling me. So, who is winning? The resurgent forces of National Socialism or the decadent democracies?"

Strothmeyer watched his meters nervously. He needed just a few more seconds. He could not risk the truth. "The fight goes on," he said. "Neither side gains much."

Churchill Two nodded. He was disappointed, but he seemed to find hope in Strothmeyer's words. "I told them it would be a long fight," he said.

"Told who?" Strothmeyer glanced at Professor Knaut, and was shocked to see how sick the old man looked.

"Goering . . . Himmler . . . Goebbels . . . all of them. I am not surprised that it is not yet over." He grew reminiscent and sank down a little into the nest. "In 1940, Ribbentrop said to me, 'Only ten more years, mein Feuhrer!' But I knew it would take longer."

Strothmeyer's hand was on the waking stud. The meter zeroed in. He glanced once at the body of Churchill One, crumpled on the floor, then looked back at Churchill Two. Curiosity made him withhold the ray for one last moment. "What really happened in the Chancellory bunker, before you disappeared, Herr Hitler?"

Churchill Two looked at him contemptuously. "I knew that my part of the great work was over," he said. "That it was up to others to carry on . . ." He started to climb out of the nest, but he

had no more than put his hands on the top of the glass door than Strothmeyer pressed the waking stud.

Churchill-Hitler stiffened, as the massive dose of radiation struck him full in the back. Strothmeyer held the stud down, a wild look in his eye, as he counted ten. Professor Knaut moaned upon his bed. The projector crackled.

Strothmeyer released the stud, and the figure in the nest sank limply into the webbing. He ran up and opened the door and took the wrist of the body as it lay. There was no pulse! The first part of the experiment was over. Now for the more difficult part.

He pulled the heavy body out of the nest and dumped it upon the cold floor. Then he crouched above its head and worked its arms back and forth in the approved movements of artificial respiration. As he did so, he spoke in a trembling and earnest voice, full of entreaty.

"Sir Winston! Come back! Wake up. He is gone, Mr. Churchill. This body is yours, Sir Winston. Come back and take it. Do you hear me? The world needs you! The people of Britain and America need you!"

The body began to breathe. Strothmeyer felt its pulse. It was strong and regular, and he exulted, but then he felt a sudden doubt. He backed away from the body, now living again, and picked up the kilo weight, which lay beside the cracked skull of Churchill One. Then he approached and waited for Churchill Two to wake fully.

It was many minutes. The blast from the waking ray had been enough to kill, when the body was tenanted by one who hated and despised it. The after-effects of the blast might still be giving difficulty to the proper tenant—if it was really to be the proper tenant now, and not the dictator again.

As Strothmeyer crouched at a strategic distance from the hard-used Churchill Two, he heard Professor Knaut wheezing and mumbling on the bed. He wondered how serious the old man's condition might be. Even if Knaut should recover from the stroke —if that was what it was—he

would probably have another when he found out how the experiment had turned out. His phœnix procedure would have been validated, but his theory of mind from cells would have been utterly destroyed.

Strothmeyer could not resist a brief hope that Professor Knaut might pass on to whatever was waiting for him, leaving the glory and honour of the experiment solely to his assistant. After all, a few cells taken from Knaut's still warm body could bring him back, too, at a more convenient time—say in ten years.

The body stirred. Strothmeyer tensed and gripped the kilo, ready to defend himself against a furious Hitler, or to drop the weight, if the mind behind those eyes that were just opening should be that of Churchill.

The face looked at him blankly. Neither man spoke for a moment, which seemed an age to Strothmeyer. Professor Knaut was tossing and grunting on the other side of the room. Somewhere in the electronic equipment, a tiny arc was buzzing like an angry insect.

Strothmeyer stared into the face before him. Slowly, a smile warmed the familiar features. Then the mouth opened and said, wearily, but roguishly: "How is it, my dear doctor, that you do bend your eye on vacancy?" The speaker tried to rise, but found that he was too weak. "I must have had an accident," he said. Then he winced. "Oh, yes! I opened the door. He was standing there. He threw something at me."

Strothmeyer shoved the kilo away, where Churchill would not see it. "Everything is all right, now, Sir Winston," he said. "But you need rest. Let me help you to another part of the building. We can talk it all out later."

Churchill nodded. Strothmeyer helped him to his feet. Once up, he was able to walk. On the way to the outside door, they had to pass the corpse of the other duplicate. Churchill stopped when he saw the grotesquely sprawled image of himself. His hand gripped Strothmeyer's arm.

"I was that one?" he asked, hesitantly.

"Yes, Sir Winston."

"And now I am this one." He looked down at his body and felt his chest with his hand.

"Yes."

Churchill nodded his head slowly, pondering the mystery of his recent migration. Then he stood erect. "Well, at any rate, here I am!" He looked about the laboratory, as though seeing it for the first time. His gaze fell upon Professor Knaut. "Is the professor ill?" he asked.

Strothmeyer turned him again toward the door and answered, as they left the laboratory: "I think he has had a stroke."

"Oh, I am very sorry!" Churchill said, stopping in the polished hall. A passing student stared, but knew better than to ask questions or interfere—the phœnix project had a high University security rating. Churchill did not notice the student.

Strothmeyer tugged him along the hall. "I want to get you to bed, first, Sir Winston. Then I will call a physician for Professor Knaut. You are my first concern. That is how the professor would want it, I am sure. If it looks bad for him, when we examine him, I will start the growth of his new body right away."

Churchill brightened. "Ah, yes! You must excuse me, Doctor. I'm afraid I am still living in the past." They entered a small room, like a hospital room, and Strothmeyer led Churchill to the bed. The new man continued: "In my day—that is, in my former day—when a man died, it was rather hard to keep track of him from then on." He chuckled.

Strothmeyer opened the bed and helped Churchill into it, watching him stretch his well-made, young limbs between the crisp sheets. "Just rest here a while," he said, "while I make the proper arrangements for your care and see to Professor Knaut."

Churchill closed his eyes and yawned. "It's rather a fatiguing ordeal—dying," he said, simply.

Strothmeyer stood by the bed a moment, reluctant to leave the vessel which held such promise for the world—

and for Rudolph Strothmeyer, discoverer of immortality. "Perhaps, Sir Winston," he said, "while you are convalescing, you may be planning your next political career."

Churchill was almost asleep, but he mumbled: "Oh, no, Doctor. I think I've had enough of that. This life, I'd rather be a painter. Great beauty in painting, you know. Always wanted to devote more time to it . . ." He drifted off to sleep.

Strothmeyer rushed back to the laboratory to tend to Professor Knaut. Running through the hall, he felt a twinge of guilt at his wish that the old man might die, but when he reached the laboratory, he felt another and stronger emotion.

Professor Knaut was gone! The lab was empty of human form, except for the corpse of Churchill One—but from the cold, still chest of that once vital body there protruded the handle of a surgical knife which someone had snatched from the tray and driven home with brutal strength.

"Oh, my God!" Strothmeyer said aloud. "Knaut's gone mad!" He raced out into the hall, his thoughts in a whirl. He had to find the professor before anyone else did, or there would be hell to pay! If Knaut were insane, that would be troublesome enough. But if he should recover, he might resume command of the experiment, and then Strothmeyer's discovery of immortality would go by the boards—as might Strothmeyer himself.

Knaut would have his own explanation of what had happened in the phœnix lab, and it would not be an explanation which would make a great man out of Strothmeyer. If the old man should take over again, all Strothmeyer's quick thinking would have been for nothing. His theory would fall upon deaf ears.

He opened door after door, off the main hall of the phœnix floor, surprising cloistered researchers in their white smocks and disturbing janitors and students, but Knaut was nowhere to be found. Probably he was already at the centre of some group, ranting against Strothmeyer and blaming him for

the failure of the experiment.

As Strothmeyer was passing the elevator, the light lit and the door opened. "Dr. Strothmeyer!" It was the first-floor guard.

"Yes, what is it?" Strothmeyer eyed the man with hostility, half annoyed at the interruption, half expecting to be arrested.

"You'd better come quick!" He pulled Strothmeyer into the car and pressed for the first floor.

"What's the matter?" Strothmeyer tried to be calm.

As the car whistled down the shaft, past ten floors, the guard said: "It's Professor Knaut. He's down at the reception desk, and he says if he finds you, he'll kill you!"

Strothmeyer's heart sank. Knaut must be telling a truly unpleasant story of the death of Churchill One. He could see the headlines: CARELESS ASSISTANT CAUSES DEATH OF CHURCHILL TWIN. WORLD TO GET ONLY ONE WINNIE. STROTHMEYER TO BE TRIED FOR MURDER OF STATESMAN.

He set his jaw and prepared to make the best of whatever awaited him. He would never go down without a fight!

For a moment, he thought he was saved. Churchill himself could be his witness. But no! They would never let him near Churchill again, and they would keep news of him from Churchill, on the excuse of not upsetting the great man.

Worst of all! And now he began to tremble, and the tears came to his eyes. They would not put his phœnix cells into the nest! They would never make him a new body. He, Strothmeyer, the true discoverer of immortality, would be one of the few who would not benefit by his own work!

At the very best, his honour and glory were gone.

With this bitter thought, he stepped woodenly from the elevator. To his surprise, men and women crowded around him, as if seeking his help. He paid no attention to what they said, however. He was busy searching for his enemy, and colleague, Professor Knaut.

"Where is the professor?" he said, determined to show a bold front.

A woman began to cry, and Strothmeyer was led into a

little office behind the reception area. There, sitting at a desk, was a defiant old man with the eyes of a maniac.

Strothmeyer squared his shoulders and faced the music. Whatever the old devil had prepared for him, he would meet it. "Did you wish to see me, Professor?" he said in a calm, chill voice.

The figure across the room screamed at him, and so shocking was its tone that for a moment he did not comprehend what it was saying. Then the meaning came to him, in a burst of miraculous, golden joy!

The angry old man across the room had said the one thing Strothmeyer had never thought to hear—out of all things, the one thing which meant that Strothmeyer had won the battle, that he was this day an immortal, in body, spirit and reputation.

By the same strange alchemy which had restored Churchill to new life, a second time, the marauding genius of the dictator had displaced the bewildered mind of a lesser juggler with men's souls. Professor Knaut, confused and sick, had abandoned his body to the more robust representative of a now-defunct National Socialist system.

The words which had been hurled in accusation at Strothmeyer by this familiar old man who was now a stranger, were: "You bungling American dummkopf! This is worse than ever! When the war is over, I'll have you shot for this gross carelessness!"

As Strothmeyer was about to speak, two burly men in white coats rushed past him and began talking soothingly to Hitler-Knaut. "Don't worry, now, Professor," they said. "You need some rest, Professor!" They seized his arms and dragged him from the room, looking apologetically at Strothmeyer as they passed him.

Hitler-Knaut was now swearing and screaming in German, but no one recognised it as such—nor would it have mattered if they had, since, once a man is judged mad, no one pays much attention to his opinions, no matter in what language he expresses them.

A member of the University

medical staff approached Strothmeyer, took his arm, and silently led him into the elevator. Strothmeyer did not resist. He knew nothing could go wrong now—or ever again.

As they rose to the top floors, the physician said, with sympathy: "I know this must shock and distress you, Doctor. You have been with Professor Knaut for a long time."

Strothmeyer rose to the occasion. "Thank you, doctor," he said, gravely. "It has been a long time, full of failures, triumphs and, above all, comradeship." He wiped away a non-existent tear. "But our work leaves little time for grieving over fallen companions. We must press on." He looked into the distance, sternly. "I would have wanted Professor Knaut to do the same, if I had been the one who had cracked under the strain." He shook his head. "Those last, violent moments of victory were more than the old man could bear. I saw it coming." He dabbed at the other eye with his finger.

The physician looked at him in ignorant admiration, nodded and said: "Yes, yes! You are so right, doctor!"

When they reached the tenth floor, Strothmeyer thanked the physician for coming up with him but begged to be excused. "I have to look in on our Sir Winston, you know," he said, and hurried down the hall.

The physician nodded and let him go. Not until he was passing the fifth floor, on the way down, did he realise the import of Strothmeyer's words. Surprise burst upon his face. He shouted at the steel walls:

"I'm immortal!"

Possible Life Forms on other Planets

by H. J. Campbell

Before we can go very far with a discussion on possible life forms on other planets, we should have a fairly clear idea about the essential characters of life. Life is very difficult to define and most good definitions of it are difficult to understand. We must tackle the problem more by description than by definition.

We learn in elementary biology that we recognise life by its possessing or exhibiting the features of growth, respiration, nutrition, reproduction, sensitivity and movement. Not all living things exhibit all these features, but most living things exhibit most of them. (We shall now use the term "organism" to mean any living thing.)

But elementary biology is concerned only with life as we know it—a phrase we will have to repeat quite frequently. And, for the moment, let us be similarly concerned. Life as we know it can exist only within a limited range of environmental conditions. These conditions include light, temperature and nutritive substances.

Light is important in a life-system such as ours, because the animal-type organisms are parasitic, in the widest sense, on the plant-type organisms, and these latter cannot photosynthesise in the absence of light. (Photosynthesis is the process by which plants that contain chlorophyll build up complex compounds such as sugars and proteins from simple substances such as water and carbon dioxide, under the influence of sunlight.) If the Sun rose for the last time tomorrow, we should all be dead within a few months, not from cold, but from starvation. During the last sad months, the last survivors might subsist on certain fungi (such as mushrooms) which need no light. But the fungi too would ultimately perish, being dependent in the long run on light-built foods.

So we can be fairly certain that life as we know it does not exist on one hemisphere of the planet Mercury, since that hemisphere never sees a ray of sunshine, being turned perpetually away from the Sun.

Temperature has to be considered for its effects on reaction kinetics (roughly, the speed of chemical reactions). Active life as we know it can occur only in the so-called biotemperature band of from about minus 10 to 60. (All temperatures are given in Centigrade.) Below this range, molecular reaction kinetics slow down and finally cease. Above this range, the speed-up of reaction kinetics becomes so great that molecules disrupt, but

even before this stage is reached proteins coagulate (*i.e.*, clot)—as often happens in human patients with high fevers; the cerebral proteins coagulate and vital functions such as respiration cease.

Now some bacteria and some primitive plants can withstand fairly long exposure to temperature extremes. However, these hardly represent active life—and indeed, under these extreme conditions they appear to be dead. This is important, for while there is no doubt that these lower organisms can *resist* extremes of temperature, there is no evidence that they can carry on normal living processes such as growth and reproduction. We can, therefore, conjecture that if the extreme conditions were sufficiently prolonged, the species would become extinct. In other words, even bacteria and primitive plants will be unlikely to *evolve* outside the biotemperature band.

Looking now at the known planets, the planets of the solar system, from the point of view of temperature, we can rule out Mercury as a home of Earth-type organisms because the whole of the temperature range on its sunlit side lies above 400, and on its dark side the temperature is low enough to solidify oxygen.

Venus has a temperature range of from minus 25 to 100, and so might not be inimicable in its higher regions to life as we know it. Mars' temperature ranges from minus 70 to about 30, and so this planet, too, might support the kind of life we know. Jupiter, Saturn, Uranus, Neptune and Pluto have temperatures ranging from minus 130 to minus 220; life as we know it could not exist on them.

So from temperature requirements, the only known planets capable of supporting life as we know it are Venus and Mars. We could say that the coldest parts of Venus approximate our tropical temperatures, and that the warmest parts of Mars approximate our sub-Arctic temperatures.

Now let us consider oxygen, as the most important nutritive substance. Life as we know it depends on oxidative respiratory processes. In order that a man might live normally, his environment must contain a concentration of oxygen of the order of 5.5 times ten to the eighteen molecules per cubic centimetre. Fluctuations may occur, with effects of varying severity, but death will ensue if the oxygen pressure falls below 65 mm. Hg. or rises above 400 mm. Hg. This is for a man—or a woman! Extending the ranges to all homoiothermic (warm-blooded) animals, the minimum pressure is about 50 mm. Hg. For poikilothermic (cold-blooded) animals it may fall to below 1 mm. Hg. —down to zero in the case of some lowly invertebrates.

Looking again at the known planets, we may once more rule out Mercury and the giant planets; the first because it has an extremely rarified atmosphere of heavy gases only; the latter because they have deep, dense atmospheres of am-

monia and methane. Any oxygen present on Uranus and Neptune is probably in the form of a solid. Pluto probably has no atmosphere at all, but if it has, then it consists of helium or neon.

This leaves us once more with Venus and Mars. Both of these planets have atmospheres containing traces of oxygen. That of Venus is mostly carbon dioxide, and there is twice as much of this gas in the Martian atmosphere as in our own.

We are now in a position to say that, from the points of view of light, temperature and oxygen pressure, the only known planets capable of supporting animal life as we know it are Venus and Mars, but that such life would be of a lowly poikilothermic kind. Similar arguments apply to vegetal life. Plants need oxygen, though not necessarily in gaseous form, and it could be that both Venus and Mars harbour plant life of a kind we know.

The green areas on Mars are tempting in this respect, but recent observations of these areas in the infra-red wavelengths indicate that seed plants and ferns cannot cause this green colouration. It is thought possible that lower forms may exist on Mars.

Where unknown planets are concerned, and there ought to be a few millions of them in our galaxy, life as we know it will exist only on those where conditions fall into the fairly narrow range we have outlined here. But there are probably several hundred such planets, and it is highly likely that some of them, at least, will support human life, more or less as we know it.

It may be that, now, some readers are thinking of the anærobic bacteria, which need no oxygen. You may be remembering that peculiar alga that lives in water near the boiling point. You may be considering the fascinating zoophytes that seem to live quite happily in total darkness.

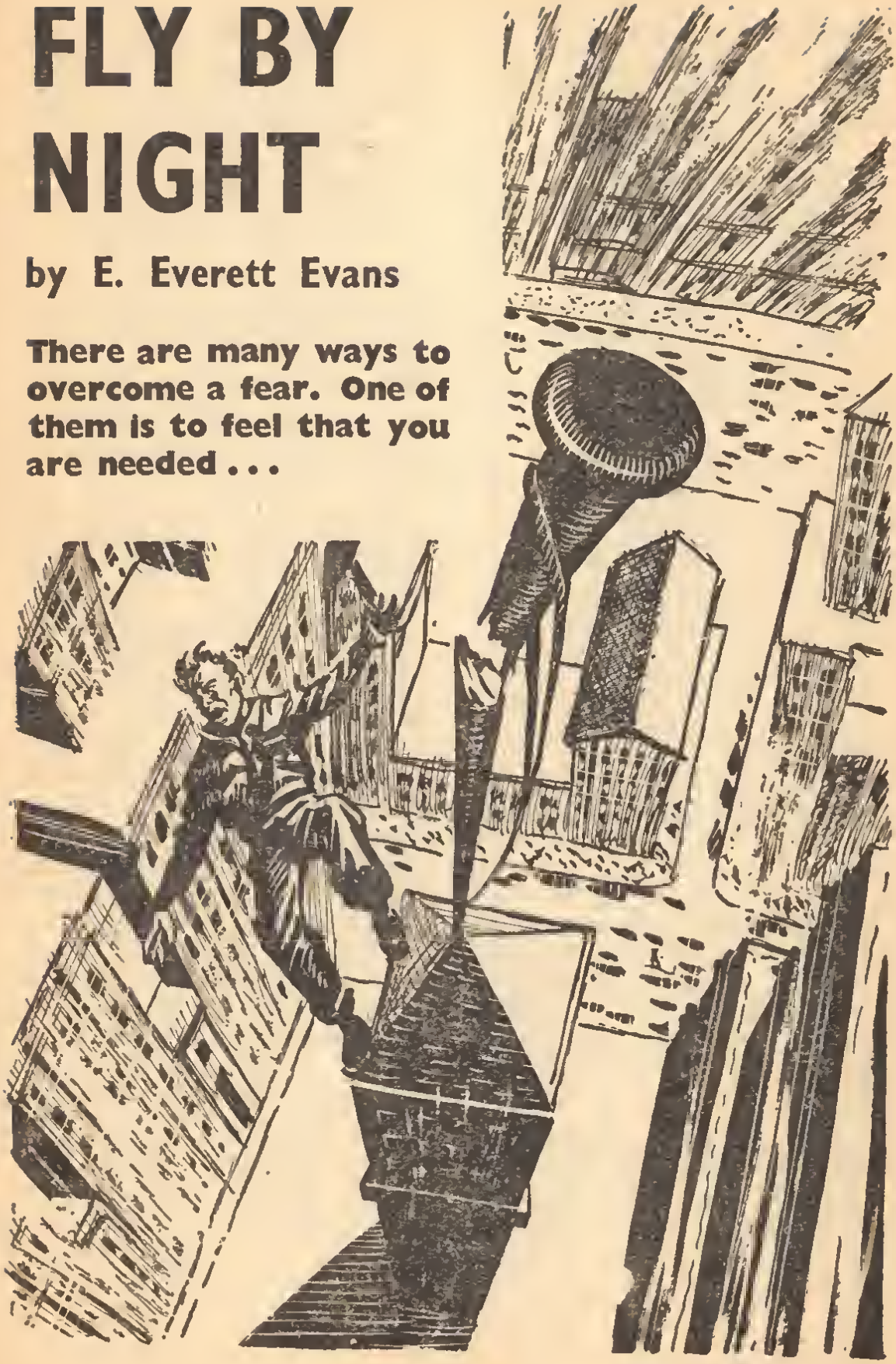
We must, of course, admit the existence of these organisms in the pattern of life as we know it. But if you think about each of them, you will come to see that each of them exists under conditions where only one of the three vital factors is distorted out of the normal range. And you will notice that in the places we have designated as being inimicable to life as we know it, at least two of the vital factors are out of true. We are suggesting that, given a normal range of conditions in the beginning, a species may evolve in such a way that it can exist under conditions where one factor has shifted out of the normal range. Astronomical arguments are available to indicate that in the "inimicable" planets, conditions did not change one factor at a time.

Next month, we will pass on to consider life as we do not know it, but as it might be.

FLY BY NIGHT

by E. Everett Evans

There are many ways to overcome a fear. One of them is to feel that you are needed . . .



Illustrated by Muller

He was dreaming the old dream again. He was lying asleep, suspended in the air against the ceiling of his room.

A senseless dream, William Newton murmured drowsily, yet one not without humour. Like those fantastic stories he wrote for a living.

Suddenly he opened his eyes.

He *was* lying against the ceiling. Below him was the floor, ten feet away, and his empty bed. Next to his hand was the light fixture and drop cord. That stirred and swung softly in the night breeze.

He was not dreaming . . . or was he? He laughed and giggled at the seeming reality, for this was such a vivid dream.

Suddenly he shivered as cold fact struck him. *This was real!*

He began to scream. "Get me down, get me down, help, help!"

He clung to the ceiling, scrabbling at it with his fingernails, raving and wheezing and threshing wildly about.

"I'll fall, I'll fall!"

Doors banged open. Feet ran outside in the hall.

Someone hammered on his door. "Mr. Newton! Are you all right?"

"Come in, come in, help!" cried William Edward Newton . . . and fell.

He struck the bed and the bed gave way with a thunder of broken springs and splintered wood. The impact knocked the wind from him and pushed the clock off onto the floor, where it took up ringing loudly, while the door opened, and the landlady rushed in, followed by others of the house.

"Mr. Newton, Mr. Newton!"

"Oh, God, God," cried Newton, weakly. "I'm safe, I'm safe. On the ceiling, I was lying on the ceiling."

"You were dreaming."

"No, no, I fell. The bed, you see? I broke it. I fell from the ceiling and I broke my bed."

"You jumped around in it while dreaming, that's all. You'll be all right. But you'll pay for fixing the bed."

Laughing, talking, jeering, the people withdrew and the door was shut and he lay on the broken bed, deeply suffused

with shame and unutterable fear.

Yes, it had been only a dream, hadn't it? He laughed at his foolishness.

But no, no, it was all too real. He *had* fallen from the ceiling. He *had* broken his bed by the fall.

Trembling, he arose. He lit a match and held it above his head.

The marks of his fingernails were there, in long, wild and hysterical gashes.

The wind blew the match out. He stood in darkness. He could no longer laugh at himself.

In the morning he'd barely awakened when he remembered . . . and shuddered. Hesitantly, he looked at the ceiling. He saw the marks there.

He almost fainted.

"But I still want to fly," he startled himself by thinking. "I will fly!"

He climbed resolutely from the broken bed and tried to levitate.

He failed.

Why? WHY? he groaned. He'd been so *sure*, this time. And he had done it last night.

It all started with those old dreams, those so-familiar dreams of impossible things. Things like walking on the walls, or jumping from a ten-storey building and landing with a feather-soft tap on the ground, alive and unhurt. The old and humorously silly dreams that he looked forward to because of their variety and imagination. And having dreamed, decided to do.

"So many serious writers contend that these are racial memories of the days when the race knew the secret of self-flight, there must be something to it," he had told himself. "Everyone, especially kids, dream of flying. If there's nothing to it, why do we dream them so often?"

He began to notice that the morning after each such dream he seemed to know more about how he did it—the actual technique.

"Some day I'll really get it," he told himself. And he'd command his sub-conscious: "Next time you are to remember in detail!"

This was a good theory, a superb theory. Psychiatrists, he knew, advise it for getting

what you want. Only . . . it did not work.

Or did it? Lately there seemed to be a sort of memory of a "holding his breath" effect. Not actually non-breathing so much as that "lifting" feeling you get when you take a deep breath and hold it. Yet he knew he couldn't hold his breath as long as he sometimes flew—half an hour or so. No, somehow he was controlling, with his mind, some sort of lines or beams of force that lifted and carried him.

" 'What man can imagine, man can do'," he quoted. "I sure have imagined it—by God I'll do it!"

And then he'd realised how serious he was getting about this impossible thing, and go off into gales of laughter at such silliness. Then would sober down and start thinking about it again.

"Damn it, I know it's more than a dream!" he rebelled.

"But you could never use it," his other self jeered. "Think how people would gawp at you and the awful publicity and the notoriety if you were ever seen flying!"

For this was his fear, born and nurtured in childhood when he was a too-tall, too-skinny kid who couldn't keep up with the other boys in their strenuous boyhood games. They taunted and ridiculed his weakness. The white-hot irons of their unthinking childish jeers and sneers and mockings had seared deeply into his sensitive soul. A horror he'd never been able to erase.

This morning his mind insisted on trying to solidify the knowledge of the technique he knew in his dreams. Just *how* had he controlled those forces with his mind? Just what was the pattern of thought necessary? They were just on the fringe of his consciousness.

It made him mad that he couldn't answer. It made him even madder that he tried to answer them. He pounded his fists on the chair arms.

"I'm a stupid, dumb fool!" he called himself . . . but it didn't do any good.

For he saw himself again, lying on the ceiling, and felt the jar when he landed, and the breaking of the bed. Then he heard again the laughter of

his landlady and fellow roomers as he tried to explain.

"It's probably just as well I've forgotten," he tried to console himself. "I don't really want to know how to fly."

His mind snorted in derision.

About three o'clock Newton suddenly felt his hunger—a gnawing inside him that was nearly a cramp. That made him angrier than ever.

"Letting myself sit here all day, mooning over sheer foolishness," he stormed. "Wasting a whole day on something everyone's tried to solve and nobody ever did! You're a fool, Bill Newton. Now forget it; you've got to finish that story this week, or you don't eat at all."

He jumped up to go to the kitchen. Jumped up . . . *and floated across the room!*

Just as he'd dreamed it so often. Gliding along, just above the floor, without touching it, without making walking motions.

So easy, too. That same apparently-holding-his-breath feeling. But the thrill of realising he again knew, and was sub-consciously using, the right procedure! Knowing now, consciously, just how to take hold of those streams of force that held him up, along which he could rise and move!

Reaching the further wall, he exultantly circled around and back across the small space. He rose until his head touched the ceiling. He curved his body about and lay down on the ceiling, and this time he did not feel the fear, nor did he fall.

He made swimming motions with his hands, and laughed with sheer joy at the way he went through the air. He turned somersaults in the air.

All of a sudden it came to him what he was doing—that he was actually flying while awake; that this was no dream.

Quickly he lowered himself into his chair, his hunger forgotten. He broke out into a fit of trembling, his mind in a far greater turmoil than he'd ever experienced before. It took an hour for his common sense to calm him.

"Look, stupid!" he railed at himself then. "You did it and you can do it again whenever you wish. So you've got a

power other folks don't have. So what? Lots of them have powers you don't have. Now snap out of it. Try it again. Go on . . . do it!"

He willed himself to rise from his chair . . . and did it without any trouble. He experimented, and found he could assume and maintain any position he wished—directions no longer meant anything to him. He could walk upside down on nothing as easy as he'd formerly walked on the floor. Easier, in fact, for there was not as much effort. Nor was there any up-side-down feeling. Blood didn't rush to his head. He could even walk up the walls, his body horizontal to the floor.

He swam into the kitchen and prepared a light meal, which he wolfed abstractedly.

Then by sheer force of will he went back and started work on his current story. He made himself stay at his desk until dark.

Still cautious and shy, fearing that ridicule which hurt him so, he went out at dusk and took a 'bus to the outskirts of the city. Getting off, he walked out to a field he knew, flying just off the ground when no one seemed near, walking naturally when he saw anyone coming.

Alone in a far corner of the field he willed himself to rise. As he did so, he raised his eyes, revelling in a greater freedom than he'd ever known.

"Here I come, Old Moon!" he exulted, and when he saw some birds he yelled at them: "Get out of the way, you birds, and let someone fly that knows how!"

Up and up he went until the chill of the upper air brought realisation of how high he was. He looked down, and far, far below were the lights of the distant city. And the fear returned.

For he'd never liked high places. Even climbing the bookshelf ladder in the library brought terror to his soul, and elevators were dropping horrors headed straight for the white-flaming pits of hell. He never used them, always took the stairs even when it was necessary to go above three storeys. He even mistrusted escalators.

"God, God, don't let me fall!" he screamed, and closed

his eyes tightly to shut out sight of the horrid depths below.

He started to descend, and the wind whistled in his pants legs, and blew out the skirts of his coat.

"Stop!" he commanded. He realised that he now hung suspended in the air. A slight measure of calmness returned.

Down, down slowly, and he felt the creeping slowness of his fall. He was far colder from his fright than from the night air, and he thought it took ages to come down, but would not hasten his rate of descent.

He was startled when his foot touched ground, and though he landed lightly as a drifting feather he sank in a heap, sobbing and patting the earth of the field as though it was the most wonderful thing he'd ever touched.

Later his innate common sense came to his rescue. "I've got to get over this fear of heights. I wasn't in the least bit of danger, except when I got panicky. It's plain I can go as high as I want, and safely, too, as long as I keep my head. I can't fall, so why let myself get so scared?"

But he still was.

"I will conquer that fear," he told himself, and lay down on the air a few feet above ground. He closed his eyes, and there he battled it out with himself.

His agoraphobia began to subside at last and he rolled over until he was face downward, then opened his eyes. Slowly he made himself rise, stopping often. Then, as he gained confidence, rose higher and faster. A hundred feet, five hundred, a thousand, five, ten, twenty, on up until he was again chilled by the increasing cold.

Still in the spirit of experimentation, he allowed himself to drop in free fall. But panic started to grip him again.

"Stop! Stop!" he cried . . . and did so, instantaneously, effortlessly.

And as he lay there on nothing, a mile above the ground, his fear of heights left him for ever.

"Man, this is wonderful!" His mood changed instantly. "What's this guy Superman got that I haven't?"

The answer was a snort of derision. "Don't go getting

any ideas, chump. You got one little power—you ain't got everything. You're still a skinny shrimp, and don't you ever forget that!"

He rollicked there in the air, rolling, somersaulting, swooping, swinging, laughing and yelling in high glee at this wonderful freedom and ability.

He wondered if he could carry loads while levitating, and dropped to the ground. He found a huge rock, one he could barely move while standing. He lay down on the air at arm's length above it, reached down and got his hands firmly under it. He willed himself to rise and did so, easily, effortlessly, the great stone seeming now to have little or no weight in his hands.

Long after midnight, feeling that his chances of being observed were almost nil, he decided to fly home. He rose high into the air and arrowed away.

"Sure beats the 'bus," he chortled.

Near the outskirts of the city he skimmed over a huge ten-storey warehouse. Seeing painters' equipment on the roof, a sudden impish whim struck him, making him forget, momentarily, his fear of discovery.

He picked up a bucket of white paint and a brush, and on the side wall that was unbroken by windows, he painted a great thirty foot square noughts and crosses design and filled it in, the "X" winning in five moves.

"Now let 'em figure how that got there, over a hundred feet up," he grinned wolfishly.

He continued his flight back across the housetops to his rooming house. He dropped, unseen, in free fall into the back yard. But as he walked around on foot to enter the front door, he encountered one of the tenants, sitting on the front porch, smoking.

"Hi, Bill," the man laughed raucously. "Fall outa th' window this time?"

"Oh, I . . . I . . ." Newton stammered and fled to his room.

He still hadn't conquered his fear of ridicule.

Newton's writing suffered more and more, as he was now sleeping nearly all day so he could go out nights and

practice his levitation in some out of the way place.

He was finding he could do almost anything he wished in the three dimensions. One hot, brightly moon-lit night, he went out to a little pond he'd seen from the air, in the middle of some woods.

It was fun trying to see all the goofy things he could do with dives. He "climbed," rung by rung, a hundred foot high, non-existent ladder, and dived off, making an effortless stop just before he hit the water. One time he curved about just before he reached the surface, and pretended to test the temperature with an out-thrust toe, only to shiver and zoom upward.

He grinned. "Boy, what a carnival act I could work up."

But he knew he'd never be able to do those things in front of an audience.

He learned to do Immelmans and Barrel Rolls. He did Outside Loops and Falling Leafs. He tried pretending he was on a giant swing, and found he could simulate that movement. He became a "high-flyer" in a circus act, swinging from one trapeze to another, doing dozens of somersaults before catching the second non-existent bar.

Tired of this sport, at last, he dived from a thousand feet in the air, slowing his speed just before he hit the water so the impact wouldn't injure him. He was thoroughly enjoying his swim in the cool water when he heard a bellow from the pond side, and a flashlight's gleam picked him out.

"Hey, you, no swimming allowed here!"

"My gosh, I'm caught!" Newton's mind shuddered at thought of the publicity. Then realised he'd only been caught swimming.

He swam quickly to the edge of the pool and splashed ashore. "I'm awfully sorry," he apologised to the caretaker. "It's so hot in town, and I didn't know this was private property."

"Well, it is. It's a private fish preserve, and don't ever come here again." The gruff voice was only slightly mollified.

Newton donned his clothes and started off through the woods and across the field.

Because he couldn't know whether or not he was being followed or watched, he took no chances, and walked. How slow and tiring it is, he thought, when he could so easily cover this distance in seconds.

For one of the things he'd found was that his speed was limited only by the air resistance. He'd covered the ten miles home the night before in about two minutes, including time for zooming a couple of thousand feet at starting, and doing the same in free fall when he got home.

William Newton was still some distance from the highway when he saw an oncoming car suddenly swerve and roll over into the ditch. He flashed forward, and found the occupant, a badly injured young woman. There was a growing pool of blood beneath her head. She seemed unconscious . . . or dead. Swiftly he felt for the pulse in her throat and found it beating, but slowly.

Carefully he dragged her body from the wrecked car, and roughly bandaged her head with his handkerchief.

"Golly, she's got to get to hospital right away," he thought, his eyes misty at her plight. He looked both ways up and down the broad, straight highway, but no car lights were visible.

He was standing there in indecision when she moaned softly. Instantly he was on his knees beside her. Her face was contorted, but her eyes still closed. Evidently she was only conscious enough to feel pain.

For long, agonising seconds Newton fought with himself. He wanted to help her. Oh, so much he wanted to. Every fibre in him cried out that he *could*—and *should!* That he was the only person who could get her to the hospital in time to save her life.

Yet he shrank back from the possibility of his peculiar gift being discovered, and himself pushed into the limelight of hounding publicity.

"Yet this is undoubtedly the reason I was given this ability," the startling thought came to him. "There must have been some real reason. I've been chosen *for* something . . . *by* something . . . or someone!"

Indecision gone, he stooped

swiftly and gathered the girl tenderly and carefully in his arms, her wounded head supported on his shoulder.

Straight into the air he swept, and arrowed toward the distant city lights. In a matter of minutes he was plummeting down in front of the hospital. I'm lucky, he thought; no one's in sight—it's nearly three o'clock.

He carried her up to the front door and laid her gently on the top step. He knocked loudly on the door, then took off in a swoop high above.

He watched until he saw the attendants come out, discover her and carry her inside. Then he made his way home.

Safe in his room, he sank into his chair, trembling in every nerve. He was thrilled he'd been able to help the girl, but still so afraid he might have been seen and recognised.

Hardly had he calmed himself a bit from that distress when he saw the blood on his coat. He took it off, and saw more blood on his shirt. He ripped that from him in a new agony of fear.

How would he ever get rid of that tell-tale blood? How could he explain it?

"The police are sure to trace me and hold me for hurting her," he muttered, trembling. "They'll find my handkerchief. Why did I leave that on her?"

He was in a panic. He fell into his chair, moaning that he was lost. His mind conjured pictures of himself in jail, himself the focus of the world's attention during his trial.

"Oh, God, I wouldn't have a chance," he groaned. "No one would ever believe me."

"I'll take them far away and bury them." He sprang up. "Or drop them far out at sea."

But dawn was already lightening the sky. "Too late!" was his panicked thought. "Oh, God, don't let me get caught before night!"

He rolled and wrapped the damaging garments and hid them in the darkness of his closet. Then threw himself onto the bed, and for the first time in a dozen years he cried, his face dug deep into his pillow.

If only he'd never learned that damned trick of levitating. Then he'd not be in this pickle.

"But then you'd not have

been able to save that girl's life," the inner voice chided.

That quieted him a bit . . . and he slept.

It was nearly noon when he awoke. His troubled thoughts of the night did not recur until he was at the restaurant, eating. Then a glaring headline, MYSTERY OF WOUNDED GIRL, caught his eye and he almost choked on the bit of "dunked" doughnut in his mouth.

He bought a paper from the cashier and read swiftly. The hospital attendants had heard a knock in the early morning hours, and found a badly wounded girl on the steps. It had been touch and go for several hours, but injections of plasma and other treatments helped her, and now it was felt she would live.

Newton breathed a glad sigh of relief at that. He was so happy he'd been able to get her there in time.

He scanned the lines following. Later, they said, the young woman had regained consciousness enough to mutter about the wreck.

Sheriff's officers had gone out along the highway, and sure enough, there was the wrecked car about twelve miles from town.

Footprints of a man were found, coming from the field up to the car. The marks where she'd been pulled from the wreckage plainly told their story.

But there were no prints *away* from the car, not even towards the pavement. Even more of a mystery was the time element. The broken clock on the car's dash had stopped just five minutes before the time the hospital attendants had found the girl. How had she gotten there in that short space of time?

The Sheriff promised a solution within twenty-four hours.

Newton fled to the safety of his room. But was he safe, even there?

"They'll follow me, sure. They'll be here any minute now! They'll trace my handkerchief on the girl's head, and they'll find those blood-stained clothes in my closet."

He must get rid of the things. But how? If he burned them the landlady would smell the burning wool and investigate.

She was the "nosey" type anyway, he reflected sourly.

The long, long hours crawled slowly by, leaving Newton more jittery with each passing moment.

Finally, near midnight, he ventured forth, the damaging package clutched tightly beneath his arm. He hated to throw that coat away—it was one of his best suits, barely three months old. But he couldn't take it to a cleaner. That would be a dead giveaway.

High into the air he sped at his fastest speed, then rocketed toward the coast over a hundred miles away. There seemed no limit to his speed, except that the growing numbness from the cold, caused by his height and the rush of air past him, made him finally go a bit lower and slower.

The coastline at last! He came down on a deserted patch of rocky beach and found a huge stone. Carefully he tied the bundle around it with a piece of rope he'd brought. Then into the air again, and out over the sea.

For half an hour he flew, then dropped the bundle, and came down near the surface, watching until it sank.

His relief as he headed back for the coast was so great he began to feel the strain. He found it increasingly difficult to hold in his mind the "pattern of flight" that made his levitation possible. Worriedly he wondered if he could reach shore. What a fool he'd been to come so far. Ten miles out would have been far enough. Or five miles. Or even one.

He did not realise quite how low he was flying until the spray from a higher than usual wave splashed against him, and sent him zooming upward—effortlessly.

"Why, I can still do it!" His thought was pure amazement.

And then he realised he'd been a silly, scared fool.

"There was no way for them to have traced me," he scolded, bitterly. "And I needn't have worried so about the coat, either. I could've soaked that blood out in cold water, then taken it to a cleaner. And even if he noticed it, I could have thought up a good reason. I'm suppose to be a writer, able to dream up plots and gimmicks."

It was with a calmer conscience but a bitter mind that he flew home and went to sleep, suspended a foot above his bed.

Two days later William Newton was one of a huge crowd standing on the corner of two of the busiest downtown streets. All necks were craned backwards, watching a man painting the tall flag pole atop the city's highest skyscraper.

The wind was strong up there, he could see, for the pole swayed back and forth alarmingly. Newton sensed the crowd shuddering at the chances that foolhardy man seemed to be taking—fascinated by a courage they did not have. He knew few realised that if the man felt the slightest tinge of fear from the dizzy height he would not be up there at all. That to some people heights are not half as fearful as the hazard of crossing a busy street in traffic . . . or working with "hot" electricity . . . or with chemicals . . . or around machines.

Suddenly there was a gasp of horror. The top half of the flag pole bent outward at an acute angle.

"It's breaking!"

Newton could see the man swiftly unfasten his safety belt and start to slide downward. Unfortunately, he was on the *under* side of the pole and his weight was breaking it more swiftly.

A great cry! The pole had broken free, and pole and man were hurtling to the street some four hundred and fifty feet below.

Newton was as horrified as the rest. But he knew another horror, too. And shrank away from the knowledge that he, William Edward Newton, could save that man from dying . . . and did not dare do so.

That he, with the marvellous power that had been given him, was a damned coward in the face of publicity.

Who can know the speed of thought in an emergency? How long can a man live in a heartbeat? What pictures can he see; what experiences relive during a short gasping breath?

Instantaneously Newton reviewed all the things connected

with his ability to fly. And one fact stood out in startling, *demanding* clarity.

This was what he was here for!

He knew that, with deadly clearness. But it's broad daylight, he groaned. Thousands of people watching. Someone is sure to recognise me. I'd be hounded from now on.

He wanted to save that man. Oh, God, how desperately he wanted to keep that body from being smashed to death there on the pavement. He couldn't let him die. That would be plain murder!

And he had the power.

He heard the crowd's second startled cry. Knew they were now seeing *two* human bodies hurtling through the air.

But this second one was going *up*, not down! Was sweeping above the falling body, and diving down toward it.

The painter was falling face downward. He'd let go of the pole, which was a bit to one side. Newton grasped the fainting man from the back, his arms under the other's armpits. He strained the body against his own, and exerted every iota of will and hard-won knowledge to slow the fall.

Lower and lower they fell. The man's tremendous speed and acceleration almost panicked Newton as he saw the ground rushing up with alarming swiftness.

He closed his eyes and forced his mind resolutely to his task, his will admitting no possibility of defeat.

And they slowed, and then curved up . . . up and across the street to the roof of a low building. Laying his unconscious burden on the roof, Newton was working to restore consciousness when men burst through the doorway onto the roof, a Press photographer in the lead.

And William Edward Newton didn't care.

(9) URANUS

Mass 14.7 times Earth. Radius 16,000 miles. Density 1.27 times water. Albedo 45%. Period of axial rotation 10 hrs. 40 mins. Period of orbital rotation 84.02 years. Distance from Sun 1,782.8 million miles. Orbital velocity 4.2 m.p.s. Escape velocity 13.0 m.p.s. Gravity 0.92. Inclination 0° 46′ 22″.

Uranus is just visible to the naked eye, being of magnitude 5.7. It receives only 1/361 as much light and heat as does the Earth. Although four times as large as Earth, this planet is only a quarter as dense—an indication that the apparent diameter includes a deep cloud layer. The plane of its equator is very nearly at right angles to the plane of its orbit; the north pole points almost directly at the Sun, and this results in greatly exaggerated seasons. Accurately, the inclination of equator to orbit is 98 degrees, and this causes a retrogade or backward axial rotation with respect to the orbit.

The planet was discovered more or less by accident in 1781 by William Herschel, though it had been marked on star charts previously, but never recognised as a planet. Its discovery doubled the radius of the known solar system and led to a search for and discovery of more planets. Herschel was given a yearly grant of £200 which enabled him to become a professional astronomer.

So broad is the planet's orbit that it had completed only two circuits by 1949 since its discovery 170 years before.

Uranus has five satellites—Ariel, Umbriel, Titania, Oberon and Miranda. These range from 80,800 to 364,000 miles from the planet, and vary in size from 150 to 1000 miles. Miranda was discovered by the American astronomer Kuiper as recently as 1948. All the others were known prior to 1852.

The BOOGIE MATRIX

by

Charles Eric Maine

Music can also be the food of hate. But hate and love are sisters under the skin . . .

Even as he was kissing her, Bax was aware of the tension. It was in the stiffness of her body, the cool lack of response in her lips, the way her eyes flickered open, staring absently over his shoulder and beyond him, as though her thoughts were far away. It wasn't the Zora he was accustomed to—the green-eyed, sensual Cleopatra of the twenty-first century; this was a different individual—a cold, pre-occupied Zora that made him frown in bewilderment.

He released her and said: "What's wrong, honey?"

Illustrated by Muller

She crossed the room to the long, rectangular window, and looked down on the triple highway three thousand feet below, cutting across Nyok City like a broad, white ribbon, dotted with minute vehicles crawling or speeding in the different velocity lanes. The view seemed to absorb her for a few seconds, then she turned to the young man. "Nothing serious, darling. I've got a surprise for you."

"What is it?"

"All in good time. First, tell me—how is matrix 24 progressing?"

"It's finished. Do you want to hear it?"

"No—not now. I'll hear it tomorrow on the Rainbow Net—it is tomorrow . . .?"

"That's right, honey. Twenty hundred. Matrix 24 will be the first work to be performed in the concert."

Zora smiled. "Good. Has it been approved by the Culture Board?"

"You bet," Bax replied, grinning. "I'm not taking any chances after the matrix 22 panic. I nearly got myself filed in the Reversionist Index —and you know what that means."

She came closer to him, warmer and more yielding this time. He whispered: "It's been a long time, Zora. I've missed you."

"Only two weeks, darling. You're too impatient. While I was up country I picked up something. It should interest you."

"Well . . .?"

"It's music."

"Music? You mean a matrix?"

"Of a kind. I'll show you soon. I want you to change matrix 24."

He stood back and eyed her in astonishment. "I can't do that, Zora. For one thing, it has the Culture Board's okay —and I daren't change any part of it. And apart from that, it's the most closely integrated thing I've ever done. I can't change it. Here—I'll show you . . ."

He crossed to a recess in a wall of the room, and withdrew a small, flat plate of metal. This he placed carefully on the round table in the centre of the floor, and with a long stylus indicated the complex

geometrical pattern inscribed on its surface. "You can see for yourself," he explained. "I'm using seventeen heterodyne harmonics—and something that has never been done before to my knowledge—I'm introducing cross-rhythm by means of supersonic square-wave modulation. There's a bit of intricate mathematics involved in the second movement, but the permutator handled it perfectly. You ought to hear it—there's a bizarre quality about the whole thing which is like no music ever heard before."

"I'm not much good at matrix reading," Zora confessed.

"I can tell you the Culture Board were delighted," Bax went on. "There's not the slightest hint of anything Reversionist. Strictly technocratic, and exploiting the most modern scientific formulæ. It will raise my status and reputation considerably, Zora. Why should I change it?"

"For me," she said, simply, turning up her face as though to be kissed.

He ignored the invitation. "But why? I don't understand."

She did not reply immediately, but picked up the large, paper-wrapped parcel she had brought with her. Bax eyed her curiously as she tore off the covering, revealing a battered, ancient, rectangular box that was . . . With a distinct shock he realised just how much of an antique that object was—rexine-covered wooden boxes hadn't been seen for centuries. It was pre-Inferno, and that meant it was Reversionist. It was dangerous—as dangerous as a helio capsule. If the Secs—the government Security Police—got to know about it, there wouldn't be much future left for himself or the girl.

She saw his growing agitation, and smiled. "Take it easy, Bax. This is a secret. So far as I know, this is the only one of its kind that survived the Inferno. Look."

Slowly she raised the shallow lid of the box, revealing a turntable disc, and a long cylindrical tube with a capsule-shaped head clipped in position to one side. There was a tiny sharp needle fastened in this head, and he could see that the tip was non-metallic

—it resembled a fragment of synthetic diamond or sapphire. There was a thin circular plate resting on the turntable, with a smaller paper label at the centre, but the colours and printing had faded long ago. He stared at it blankly, not comprehending its purpose.

"What is it?" he asked.

"It's a graphofone—or a fonograph—or something like that," she stated. "In other words—it's a music machine. Mid-twentieth century vintage."

"Where did you get it?"

"From a friend. No names, no come-backs."

"Some friend!" he said, scornfully. "That thing could cost you your life—if the Secs . . ."

"The Secs don't know about it, and they won't. See this black plate? It's a kind of matrix. It carries the music in the grooves—primitive amplitude modulation in a physical recording. None of your intricate matrix-permutators here. This is the music of the pre-Inferno age."

"Not so loud!" Bax warned her, looking round the room as though expecting to see half a dozen Secs appearing from nowhere.

She looked at him sardonically, with quiet confidence, then went on: "And this gadget is a very simple acoustical reproducer. The tip of the needle follows the undulations of the groove, actuates a diaphragm, and the sound waves come out here." She patted a square, fabric-covered opening in the front edge of the box.

"Very interesting," he commented with a certain degree of sarcasm. "Now please, Zora—let me destroy the thing."

But the girl had produced a small cranked handle from the lid, and, inserting it in a hole in the side of the box, busied herself by winding up an unseen mechanism that creaked and groaned as though burdened with a century of rust and dirt. Then she pushed a small lever near to the turntable, and the latter began to revolve. Carefully, she picked up the long cylindrical tone arm, and dropped the needle on to the shiny black recording. Bax listened—horrified, but fascinated.

The quality was atrocious

by twenty-first century standards. There was an almost intolerable hiss and mush from the needle point, and the reproduction was tinny and unreal, but the music that came from the grille was recognisable. It was a recording of a pre-Inferno instrument, a primitive hammer and string device that produced music from the out-moded Reversionist twelve-note chromatic scale. But as he listened the rhythm of the music seeped into his brain.

It was a sound that had not been heard in the world for nearly a hundred years, a type of music utterly foreign to a humanity that knew only the synthetic discords and subtle rhythmic interplay of tones and harmonics produced by an audio-permutator from a metal matrix, inscribed with curves and lines, corresponding to mathematical equations and formulæ. It gripped him and hypnotised him. He felt his feet tapping instinctively in time with the precise beat and the dynamic syncopated chords and melody.

It was piano music. It was wonderful piano music. He was listening to boogie-woogie, to the Honky Tonk Train Blues, played by an acknowledged master of his craft. It was Reversionist and primitive, while he was a technocrat and a world-famous composer, but he was entranced.

The performance finished, and the girl lifted the pick-up, returning it to its original position on the clip. She regarded him quizzically. "Did you like it, darling?"

"Like it?" he echoed. "I'll say I did. It's fascinating—the same kind of fascination you find in a poisonous snake. It's raw, but it's gripping. It's an entirely new departure in music."

"You're wrong there, Bax. That recording was made a century ago. It just happens to be one of the few isolated things that managed to escape complete destruction at the time of the Inferno. Do you think the others will like it, too?"

"What others?"

"Anybody. The rest of the people in the world. The ordinary people like you and I."

"Sure they'd like it, but

they'll never get the chance to hear it."

"But they will, Bax. I want you to transcribe it into your composition."

He stared at her in genuine horror. "I can't do that, Zora. I'd be signing my own death warrant. The Secs would arrest me as soon as the first notes got broadcast. Then they'd cut the transmission, and that would be an end to everything."

She smiled persuasively, and moved towards him. "You don't have to worry about broadcasting Reversionist music, darling, because the Reversionists will be looking after your skin and your interests. You've heard of Karl Soliki? This thing was planned by him, and every conceivable detail has been considered. Tomorrow the revolution against Bressler's technocrat dictatorship begins —and matrix 24, containing the Reversionist music, will be the signal. Let me explain . . ."

Some time later Zora descended swiftly to street level in the gravity drop tube, and went down the ramp to the subway, where the velo-tracks conveyed pedestrians to all parts of the city—humanity on high speed conveyor belts. She stepped off at the West Mantan commuting point, and walked swiftly through the chasm-like streets of the city to a residential skyscraper, set back a little off the main highway. Here she ascended by pneumatic elevator to the fortieth storey, and pressed a button on the door of an apartment. A video monitor lamp flashed momentarily above her eyes, then the door slid silently into the wall. She stepped into the welcoming arms of a tall, dark, and pleasantly ugly man.

She said: "Hello, Karl. Guess what?"

"I never guess. I always have reliable information."

"Then what's your reliable information about me?"

"That you love me."

"Good guess."

He smiled—a little sardonically—and led her into the lounge, a luxuriously furnished room with cold, grey-wash walls, and concealed rose lighting that seemed to add heightened colour to the

girl's smooth complexion, and sprinkled a touch of auburn onto her corn-gold hair.

Karl Soliki said: "Did you succeed with Bax?"

"Yes. He's scared to death, but he's agreed to co-operate. He's a Reversionist at heart, though afraid to admit it."

"Did you have to try very hard to persuade him?"

She coloured slightly, but held his gaze. "Results count," she stated, calmly. "Why hold an autopsy?"

"I think you could probably persuade anyone to do anything," he commented in a matter-of-fact tone of voice.

She ignored the jibe. "The pre-Inferno music will be going out on the Rainbow network tomorrow evening at twenty hundred."

"Good," said Karl, immensely satisfied. "That is the last factor in the organisation. I have six men ready to force their way into the control room and transmitter bay at nineteen fifty-nine, and they will keep matrix 24 on the air in spite of all attempts by the technocrats to close down the transmission. The whole world will hear this—boogie."

"Is that what they call it?"

"That's what Mallory calls it, and he's nearly old enough to remember."

"What happens next?"

"Bax will be arrested."

"And then . . .?"

"And then two thousand armed men will ocupy Video Tower and take over all radio and vision transmission services. At the same moment the Citadel will be blown up by four fused helio capsules—they are already in position. Once the seat of technocrat government has been destroyed, a few selected friends, including Bressler himself, and Kratt, Chief of the Security Police, will be quietly assassinated. The people will be kept informed of the progress of events by radio. I have nearly two hundred thousand trained Reversionists waiting for the signal to overthrow the regime—not only here in Nyok, but in all the principal cities—Shkargo, Lozange, and all over. We can't fail."

Zora considered this for a moment. "No—we can't fail—provided the Secs don't find out about it first."

"They won't," Karl replied, confidently.

"We'll have the support of the people."

Karl smiled. "Of course. That's where matrix 24 comes in. Bax is an immensely popular public figure. His music is renowned all over the civilised world. The boogie will be irresistible—people will be fascinated by it, and attribute it to Bax's genius. His popularity will increase even more. And then comes the arrest. When we occupy the Video Tower, and overthrow the government, liberating Bax at the same time, the people will inevitably support us, because we shall be striking a blow for culture."

"The best blow for culture will be the destruction of the Culture Board."

"One of our first tasks, darling. You appreciate the simplicity and the logic of the plan . . . First, the incident—boogie and the arrest of Bax; second, retribution—the uprising of the people, led by the Reversionists, against the despots.

Zora nodded thoughtfully. "It sounds foolproof," she admitted. "And now, darling, I must go. But first—give me a shot of synapsin."

Karl produced a long, slender hypodermic, and carefully measured a quantity of colourless fluid drawn in from a sealed phial. He took her arm gently, pressing the flesh into a ridge, then quickly and skilfully injected the contents of the syringe. Zora remained motionless and expressionless.

"That will stop me from talking—just in case . . ." she remarked.

"In case of what?"

"In case I run into trouble with the Secs. I couldn't hold out against truth drugs, psycho-semantic analysers, and perhaps even torture—without synapsin."

Karl frowned and took her in his arms. "Let any man dare to lay a hand on you," he said, quietly. "I'll tear him apart."

"I hope you won't ever need to, Karl," she replied, and kissed him.

Down at street level again, Zora walked along Eastern Highway towards the north-

ern suburbs of Mantan. The velocity lanes were busy with traffic—jet cars flashing by, raised about a foot from the smooth metallic surface of the road by magnetic repellers so that they were effectively airborne. The inner lanes carried the high-speed vehicles conforming to the minimum speed limit of 120 miles per hour, but the majority were whistling past at something approaching 200. The outer lanes carried the slower traffic. In the nearest lane, about fifty yards behind her, Zora noticed an elegant, shining jet car idling slowly along, but drawing nearer. She quickened her pace, some instinct warning her of danger. There were no side-turnings at this section of the block, and no stores where one could mix with the crowd. A few pedestrians were about, intent on their own affairs.

The car overtook her, and stopped smoothly about five yards ahead. The side door slid open, and two hulking, uniformed men stepped out, turning back towards her. Zora halted, momentarily panic-stricken, but there was nothing she could do.

The men stood on either side of her. "You Zora Varney?" one enquired.

"No," she lied instinctively. "That's not my name."

"Okay. We'll check on that at Headquarters. Come on."

They took her arms and forced her towards the waiting car. Some of the passers-by saw what was happening, but they didn't look for long. They kept their eyes fixed ahead, knowing that it wasn't healthy to be too curious about the activities of the Secs. Someone has slipped up—they thought. Poor girl. Still, it must be her own fault. Everyone knows the law, and everyone knows about the Secs.

But Zora, sandwiched tightly between the two police officers in the jet car, was not feeling sorry for herself. This was a practical situation, and it needed practical thought, not useless emotion. She was glad of one thing—the synapsin. At least they couldn't make her talk for forty-eight hours, and by that time the Reversionist revolution would be over. Karl Soliki would set her free.

It was the thought of what might happen in the next few hours that made her feel sick.

Security Division was a squat, square building set to the rear of the rectangle of government blocks that comprised the Citadel, located in the west suburban district of Nyok. It was no more than twenty-five storeys high, and was overshadowed by adjoining skyscrapers, but there was an appearance of grim impregnability. It resembled a fortress.

One section of the building was officially called the Interrogation Centre, and the procedure for handling arrested citizens had long ago been reduced to a ruthlessly efficient routine. Zora was searched physically and by X-ray, then underwent preliminary questioning—a stereotyped quiz on identity, address, relatives, and similar personal data. She remained stubbornly uncommunicative, not hesitating to lie whenever possible in order to cause confusion. But it was a forlorn hope.

Then followed a thorough medical examination. Inevitably the blood test revealed the presence of synapsin, and after she had left the clinic, the medical officer immediately switched on the internal videophone, pressing the switch labelled "CDR." In a few seconds he was talking to a flabby, dark-eyed face on the screen—the face of Commander Kratt, Chief of Security Division and Administrative Head of the Security Police.

"I've just examined Intake 3357," said the doctor. "Zora Varney—age about 27. I found a large amount of synapsin in the blood."

Kratt frowned. "That means she's a Reversionist. No ordinary citizen can get hold of synapsin. Right."

The screen went blank as Kratt switched off. He heaved his sagging bulk from the steel and plastic chair behind the large black desk, and went into an adjoining office. A uniformed man sprang to attention.

"Get Major Rondo," Kratt snapped. "Then go down to room fourteen, and take charge of Intake 3357. She's a synap-

sin case. She'll need softening up."

"Yes sir," replied the other, saluting.

Kratt returned to his own office, subsiding once more into the chair behind the desk. He tapped its polished surface with a gold pen, his face heavy-jowled but dead-pan. After about half a minute a musical tone vibrated faintly, and a small video screen mounted on the desk glowed. Kratt studied the features materialising on its surface, then said: "Come in, Rondo."

Major Rondo entered smartly. He was a tall man, quite handsome in a saturnine way, with deep-set eyes and smooth, greying hair. He halted at the desk, then saluted with military precision.

"I sent for you because I want you to take personal charge of the interrogation of a new intake," Kratt stated, tonelessly. "She's Zora Varney, No. 3357. Synapsin case. According to the commitment papers"—he riffled through a sheaf of documents on his desk—"this woman is associated with Karl Soliki. That may be important, in view of the rumours of insurrection which have reached us lately. Break her down, Rondo."

"Hm. I'll try," Rondo replied. "You know synapsin. Maybe the Weiss-Karnfeld test will produce results. Where is she?"

"In supersonics. She can stay there for six hours, softening—then she's all yours. I want a full report as soon as possible."

"Okay, chief," said Rondo, and left the room.

Six hours in supersonics—that sounded innocent enough, but Zora learned the truth the hard way. She found herself stripped of clothing and confined in a small circular cell with walls and floor of gleaming metal. The ceiling was an incandescent fury of white light that seemed to fill the place with fierce, blinding illumination. If she kept her eyes open, they ached intolerably after a few minutes; if she closed them, the light still came through the lids in a crawling scarlet wash. Three recessed cavities in the wall concealed the peering lenses of video monitor cameras, maintaining unceasing scrutiny.

The temperature was frigid. Expansion pipes under the flooring sapped the warmth from the air and from her body; a white mist of condensation formed every time she breathed. There was no furniture—only the floor to lie on, with a surface temperature below freezing.

The air in that confined space was vibrating continually at a supersonic frequency, beyond the range of audibility, but nevertheless blasting its way into her brain, creating tension, neurotic headache, and a terrifying awareness of approaching insanity. On top of all this, a recorded voice talked incessantly in cultured, plausible accents, presenting a highly coloured picture of the virtues of the technocrat state, and outlining a much-edited version of recent history. The voice was peculiarly insistent. Coupled with the supersonic tone, it seemed to reverberate and circulate in her head, until she felt as though she were not a human being at all, but some kind of soulless robot.

"Science is the outward symbol of man's superiority over the beast," said the voice. "It is the material product of human reason and intellect. But it must be used—not abused. History has shown only too clearly the disastrous and evil consequences of the abuse of science; the succession of wars, growing ever more technical, and always incorporating the latest developments in scientific research, culminating in the Inferno—that holocaust of uncontrolled atomic destruction which, a mere three generations ago, wiped out more than ninety per cent. of the earth's population, and destroyed virtually every vestige of culture and civilisation.

"The high pinnacles of achievement to which we have attained since that catastrophe bear witness to the miracles which can be achieved by the proper application of science, and the forces of science. Since the technocrats have ruled the earth, man has emerged from the dark aftermath of the Inferno, and has climbed to a level of culture and progress hitherto unknown on this planet. Under the benevolent rule of the technocrats, man

has turned his back on history. Anything pre-Inferno is evil. All that is post-Inferno is good. Those who would turn their eyes backwards to pre-Inferno cultures and institutions are reversionist, and are the enemies of mankind. They are the cancer of Society, and will be destroyed."

So it went on, praising the accomplishments of the technocrat administration, heaping abuse upon the Reversionists—on and on incessantly. The speech lasted about half an hour, then immediately commenced all over again. At the end of the six hour period, Zora knew almost every word by heart. She was shivering uncontrollably, her skin purple with cold, and mentally almost frantic with the continual propaganda and, above all, the unheard but ever-present supersonic frequency. Then a door slid open in the wall of the cell, and the softening-up treatment was over.

"You are required for interrogation," said the guard.

The Interrogation Room was large, softly lit, and carpeted. The air was warm, almost tropically warm, and after six hours of refrigeration, Zora relaxed, physically and mentally, feeling the energy slip out of her body and mind as the warmth seeped in. That was the way they broke down will power—by the calculating application of psychological and physiological principles. They had given her a long wrap of heavy woollen material, and that, in conjunction with the high temperature of the room, made her perspire. But she didn't care to loosen it; she had nothing else to wear.

She was propelled into a chair facing a long desk, behind which sat three officers. Major Rondo, in the centre, eyed her speculatively. She looked tired and hollow-eyed, with her hair all awry, and her lips drawn into a thin, stubborn line, but, in spite of that, she still had beauty, and an indefinable air of quality. He pressed a switch on the desk, setting in motion concealed film and tape mechanisms that would record her every gesture and change of expression, and every sound she uttered. Then, smiling re-

assuringly, he leaned forward, and offered a silver cigarette case. Zora extended her hand automatically, selected a cigarette, then suddenly dropped it.

"They're not drugged," said Rondo.

She made no reply. He shrugged his shoulders, and lit one up for himself.

"First of all," he stated. "I must apologise for the discomforts you have endured, Miss Varney."

"You've made a serious mistake. That's not my name," she replied, flatly.

Rondo smiled. "Please don't underestimate our intelligence, or the efficiency of the Bureau. We know your name. In fact, we've been watching you and your friends for some time."

"I've nothing to hide."

"Except your name? Never mind—we'll forget about that for the moment. You mustn't be afraid of us, Miss Varney. All we want is a little co-operation—the answers to a few questions, and then you can go free."

"I have nothing to say."

"Not even after six hours in supersonics? How strange! We usually find that our pre-interrogation treatment is quite successful. It makes people more co-operative—more obliging."

Zora said nothing. She felt quite calm and comfortable now, with only a ghost of apprehension fluttering in her abdomen.

"We have other methods," Rondo went on, still talking in an even, almost pleasant, tone of voice. "But I'm sure they won't be necessary. Lieutenant Pope here"—he indicated the officer on his left—"is going to ask you a few questions. When you have answered them—to our satisfaction—you can go free."

He pressed another switch, and a blinding light came from a raised unit on the desk, etching every detail of her features in stark relief. Rondo disappeared into an obscure shadow beyond the light. This is it, the girl decided. She guessed that cameras would be photographing her, and that tapes would be recording what she said—but it didn't matter. The synapsin would obliterate

every trace of response to the questions flung at her. It was going to be easy.

"Forgive the illumination," said Rondo, smoothly. "We like to see our guests—particularly the more attractive ones, such as yourself. Okay, Lieutenant—take over."

"Why did you go to see Bax Borden?" snapped Pope. Zora tried to pierce the blurred haze that screened her interlocutor, but she could see only a silhouette.

"I didn't," she replied.

"We know you did. And it wasn't your first visit. Is he your lover?"

"I don't know him."

The questions were as though meaningless. That was the effect of the synapsin, which acted directly on the nerve synapses in the brain tissue, hindering recognition of ideas, and obscuring association of memory trains and interlinked data. It was like holding a conversation in a foreign language which one could readily understand, without being able to find the correct words for expression of simple ideas. The Secs were wasting their time—she couldn't give a coherent answer even if she wanted to.

"What did you talk to him about?" Pope went on in the same, bad-tempered voice.

"Who?"

"Bax Borden."

"I don't know Bax Borden."

"Did you talk about Matrix 24?"

"I don't know what you mean."

"Why did you visit Karl Soliki?"

"I didn't."

"We know you did. You were seen leaving the block where Borden lives, and to travel by velo-track to Soliki's apartment. You were with him twenty minutes. Why did you go to see him?"

"I didn't."

"What did Soliki say about —insurrection?"

"I don't know what you mean."

"What is the connection between Soliki and Borden?"

"I don't understand you."

"Let me put it this way. What is the connection between Matrix 24 and the Reversionist plot to seize power?"

"I know nothing of Matrix 24 or Reversionist policy."

"Who gave you synapsin?"

"Santa Claus."

"Soliki gave you synapsin. He is a big power in the Reversionist group."

"If you know, why ask me?"

"Are you in love with Soliki—or Borden?"

"What is love?"

Rondo snapped the light beam off. "We might take time out to demonstrate, later," he remarked. "However, that's enough for now. You can go. Guard—take her to the ordinary isolation cells."

Zora went out, relieved that she was not being returned to the supersonics room. The interrogation had been a farce. Lieutenant Pope had simply gone through a set of routine questions, and nobody seemed to care whether she bothered to answer or not. Knowing that she had taken synapsin, perhaps they realised the futility of questioning, and had merely carried out the interrogation in order to comply with standard procedure. Once the effects of the synapsin had worn off, they would doubtless adopt a more ruthless attitude . . . but that was in the future. For the present she was content to be confined in isolation, conscious of the passing hours leading, inevitably, to the broadcast of Matrix 24 and her release.

That was—provided everything went off according to plan. They had linked Bax with Karl, and had mentioned Matrix 24. How much did they really know? Or were they guessing? Perhaps they already knew as much as she could tell them, and that was the reason they hadn't grilled her too hard? She had no way of finding out.

When she left the Interrogation Room, Pope said: "That was a complete waste of time."

"Of course," Rondo agreed. "Pressure would be useless while she's under the influence of synapsin. But we have the recordings. I'll send them down to the psychosemantics laboratory. They may be able to build up an interpretation from tone and inflexions, or from facial expressions."

"She was dead pan—face and voice," Pope stated.

"It doesn't matter. I'm relying on the Logical Analyser. I think we have enough basic data to punch a card full of holes. The machine will run through every conceivable permutation and combination of the basic information, rejecting the improbable situations, and supplying detailed analyses of the more likely situations which could conform to the data we provide."

"I see," said Pope, thoughtfully. "The facts we know are part of a pattern, and the machine picks out the most probable patterns, one of which will correspond to the real situation."

"Provided our basic facts are accurate. Now what do we know? Take Karl Soliki. He's in the Reversionist Index. We could have arrested him long ago, but it's been our policy to let him have enough rope to hang himself. We believe that he's tied up with a Reversionist plot to seize power. But that's all we know. We haven't any definite evidence to go on at present.

"Then there's Bax Borden, the composer. He's not a known Reversionist, but he has tendencies that way. He's in the Index because of an indiscreet musical work—Matrix 22—which was recently banned by the Culture Board. The only link between these two—Borden and Soliki—is this girl, Zora Varney. We've been studying her for some months. She's visited Soliki quite frequently—and Borden less frequently. Today she went straight from one to the other, staying about twenty minutes at each address. That sounds like business rather than pleasure—especially when you take into account the fact that Borden is broadcasting a new work tomorrow evening—Matrix 24—and it has already been approved by the Culture Board. That may be significant—and that's why she was brought in for interrogation."

"Maybe we ought to arrest Borden and Soliki?" Pope suggested.

"Not yet, Lieutenant. We want to find out what is going

to happen without upsetting the Reversionist organisation and forcing them to change their plans. We want to know their intentions, so that we can produce an unexpected counter-attack—and thus deal them a death blow."

"Okay," said Pope. "I see what you mean."

An hour later Major Rondo left the psycho-semantics lab, where the Logical Analyser was also installed, and went straight up to the office of Commander Kratt. He looked smug and satisfied, and Kratt eyed him with a certain degree of heavy affability. "Find out anything?" he demanded.

"Yes and no," Rondo replied. "The girl said nothing—or virtually nothing. But we didn't anticipate co-operation—not with synapsin."

"Well?"

"Psycho-semantics couldn't get much out of the recording—except that Soliki is definitely a Reversionist, and that she loves him."

"The first we knew and the second doesn't matter," said Kratt with a trace of irony.

"It might matter if we really wanted to make her talk—by applying a little brutal technique to her lover."

"We don't want Soliki here yet."

"True, chief. Well, the next thing was to send down a summary of basic data to the Logical Analyser. That was more successful. It provided fifty-four probable situations, and seven most probable. Most of these involve Borden and Matrix 24 in a plot to seize power by the Reversionists. Two specify an armed attack on Radio Tower."

Kratt considered this for a moment. "Most interesting," he murmured. "These seven situations—how can we determine which of them is nearest to the truth?"

"We can try the Weiss-Karnfeld test. It doesn't work in every case—but you never know."

Kratt rose to his feet ponderously. "I'll come down and see this," he stated. "I like to keep up with modern developments."

From the rectangular window of the annex Kratt and Rondo looked into Room 25. The latter resembled a small dentist's surgery, containing a high manœuvrable metal chair with head rest, in which Zora Varney was strapped, and a massive instrument console with switches and meters, which was in the process of being adjusted by a white-coated technician. Zora was dressed in a simple grey uniform—blouse—tunic and slacks—which made her look shapeless and characterless. Rondo pointed out various features of the installation to the Commander.

"The machine is a kind of electronic encephalograph, which simply records the brain currents in certain parts of the scalp. We are mainly interested in the alpha rhythm. In the normal person, the alpha rhythm is most apparent when external stimuli are zero, or at minimum. Sense data usually cause a corresponding deflection in the trace, and sometimes the alpha rhythm is obliterated."

He crossed to a tall instrument panel in the annex, in the centre of which was a large blank video screen. "This is the visual display unit," he explained. "The waveform of the alpha rhythm can be shown on this screen. Now a characteristic of synapsin is that it greatly increases the synapse resistance of nerve and brain-cell junctions. As a result, sense-data have very little influence on the form of the basic trace—in fact, the alpha rhythm is most pronounced, clean and regular. This is to be expected, because the associative processes of the brain are inhibited by the drug. Alpha rhythm is the sign of cerebral inactivity."

"I see," said Kratt.

The technician had strapped an electrode web on to Zora's head, after which he operated controls on the encephalograph. Rondo adjusted the monitor until a green, undulating line appeared on the screen—a series of regularly disposed, sharp peaks glowing steadily on the recessed video panel.

"There you have the basic alpha rhythm—Zora Varney's brain waves," he said.

"What happens now?"

asked Kratt, watching keenly.

"This is where the Weiss-Karnfeld test really begins, chief. The technician will start the flicker."

He pressed a button on the monitor unit, causing a red light to wink on the console in the test room. The technician threw a switch, extinguishing all illumination, and then, a few seconds later, a brilliant lamp, close to the girl's eyes, came on. There was a curious, unstable quality about the light which prompted Kratt to ask: "What kind of lamp is that?"

"Just an ordinary gas-discharge—but of high luminosity. It is painfully bright. And it flickers—from peak white to black—sixteen times per second. Now look at the alpha trace."

Kratt scrutinised the screen once more. The green alpha peaks were still there, but the smooth outline was broken by a series of pips—one in each side of the undulations. The distortion of the wave shape was slight, but readily discernible.

"There you have the effect of visual sense data, superimposed on the basic rhythm—in spite of the synapsin. Flicker frequency, sixteen; alpha frequency, about eight—so you get two pips to each cycle."

"Hm. Interesting," Kratt grunted. "Now what?"

"Now Lieutenant Pope will read out each of the seven probable situations over an intercom system. The girl will hear them via a small speaker close to her ears. The moment she recognises the true situation—the one which she must not reveal—her synapse resistance will increase. It must increase, because the effect of the synapsin is to hinder recognition. The moment that happens, the visual flicker pips on the screen will diminish in size—perhaps even disappear—leaving a clean alpha rhythm. That is the Weiss-Karnfeld test—the determination of recognition, whether conscious or subconscious, by observing the effect of classified information from the Logical Analyser on the artificial flicker modulation, superimposed on the alpha rhythm of the brain."

"Very clever," Kratt conceded. "Now let's have a demonstration."

"Right," said Rondo. He pressed a button on the monitor, and received an answering signal on a tiny green pilot light. There was no sound—only a faint hum from the equipment in the annex.

"Pope is now reciting," Rondo said, quietly. "Watch the alpha rhythm. As soon as the pips fade, I'll signal him—and then we'll know which is the true situation."

Minutes passed by in silence. Rondo kept glancing at the girl in the chair, illuminated by the flickering glare from the lamp, motionless—resigned. She didn't know what was happening, and she had her eyes closed—but it didn't matter. Light of that brilliance went clean through eyelids with no trouble at all. The technician waited by the encephalograph, looking bored and uncomfortable—probably he was not enjoying the flicker. Kratt was watching the monitor screen intently, almost holding his breath in eager anticipation.

And then the trace changed. Quickly the pips bobbed up and down for a fraction of a second, and then they faded completely, leaving only the clean outline of the alpha rhythm. Rondo's finger stabbed on a button. About a second later the pips reappeared. Kratt smiled in oily satisfaction.

"She was a good subject," Rondo stated. "And although she doesn't realise it, she's told us all we want to know."

Back in the Commander's office, Kratt studied the pink card which Lieutenant Pope had brought in to him. In concise auto-typed phrases, it summarised the salient details of the true situation—the one which the Weiss-Karnfeld test had identified in a positive manner. Rondo leaned over him, forming an independent opinion.

"You see," Kratt announced, pointing triumphantly at the card with a squat forefinger. "Matrix 24 is the key to the whole business."

"Yes. Very ingenious," Rondo remarked.

"The scheme is to broadcast, as part of Matrix 24, some music of pre-Inferno origin which, because of its powerful emotional appeal, will achieve instantaneous popularity. We would automatically arrest Borden on Reversionist charges, thus arousing considerable public indignation. The Reversionists seize upon this wave of hostility to launch an attack on the Video Tower, thus gaining control of all public information services."

"There is also a suggestion that an advance party will seize the transmitter and studio control sections, temporarily, in order to prevent the transmission of Matrix 24 from being cut," Rondo pointed out.

"We can easily deal with that. I'll have a thousand guards on duty at the Video Tower tomorrow evening. I'll throw an armed cordon around the transmitting site."

"That should hold them. The analysis doesn't mention any further attacks—but probably we weren't able to supply enough basic data."

"It doesn't matter, said Kratt with smooth confidence. "We know enough to take decisive action. We'll let them start their abortive insurrection, and then strike hard."

"You mean—the broadcast will go out . . . ?"

"Exactly. Matrix 24 will be broadcast in full. But we won't arouse public hostility by arresting Borden. Instead we shall honour him. Look, Major—get in touch with the Director of Video and Radio Services at the Tower. Tell him we shall be sending armed guards to prevent Reversionist interference with transmission. Matrix 24 is to go out in full, and immediately afterwards the continuity announcer is to make a short speech explaining that the Government has decided to permit the transmission of this unusual musical work as a tribute to the creative genius of its composer. Borden is to be given a big boost."

"But why?" Rondo enquired.

"Obviously—instead of creating hostility, we shall gain the approval of the public. We shall back Borden.

In that way the people will support us, and will have no sympathy for the Reversionist tactics."

"I see," Rondo said, thoughtfully. "That's a good idea. Without the approval of the people, the Reversionists will find insurrection difficult."

"They'll find it impossible. Every citizen will be a potential enemy. In the meantime, I shall have a unit of the Army moved to Video Tower, in readiness for the assault—if it comes. When we have wiped out the preliminary attack, I predict there will be no more momentum in this revolution. It will simply evaporate. One more thing—I propose to have Karl Soliki arrested and brought here tomorrow evening. We shall need a scape-goat—and he's one of the ring-leaders of the Reversionist movement."

"Good enough," assented Rondo.

He went down to his own office, and put through a videophone call to the Director of Video and Radio Services. "Major Rondo, Security Division, here," he said to the face on the screen. "I have instructions for you from Commander Kratt."

"Go ahead, Major," said the other.

"We're anticipating trouble with the Reversionists tomorrow. An attempt may be made to seize the Tower."

"As bad as that?" enquired the Director.

"Don't worry. We're detailing a special task force of Security Guards to handle the situation. Leave it to us. Now, this is your province. Borden's Matrix 24, which is scheduled to go out on the air at 20.00 hours, is expected to contain pre-Inferno music of propaganda significance."

"What do I do?"

Rondo considered his words carefully. "Have it monitored," he said, slowly. "When the pre-Inferno passage starts, let it ride for about a minute—enough to permit the public to have a taste of the kind of culture the Reversionists want them to enjoy—then fade it out. Have Borden arrested immediately. Announce the fact of his arrest without delay—quoting the authority of Commander Kratt. Then

put on a pre-recorded programme—something strictly technocratic—such as a talk on the æsthetic significance of eighth-order harmonics in dissonant fugues. Got that?"

"Yes. I'll do what you suggest."

"Good. In the meantime—regard those instructions as top secret. We don't want any leakage of information."

"Certainly, Major."

Rondo clicked a switch, and cut off the contact. He grinned happily for a moment, then lit up a cigarette. The stage was set for a most interesting situation.

Four people sat in Commander Kratt's office at 20.00 hours on the following evening. There was Kratt himself, looking confident and supremely self-important; Major Rondo, immaculate, with a rather enigmatic expression in his eyes; Zora Varney, still dressed in the grey blouse and slacks, and Karl Soliki.

A small intercom unit on Kratt's desk was switched to a radio monitor receiver, located in the communications room on the floor below. Kratt had waived the usual interrogation procedure when Soliki had been brought in; for one thing he was probably full of synapsin, and in any case, it didn't matter. The Bureau had enough evidence against Soliki to put him in half a dozen gas chambers.

"We know all about your plans," Kratt had said to Soliki. "I'm going to sit here and enjoy the expression on your face as you hear the preliminary stages of your revolution crumble."

"We shall see," Soliki had replied.

The girl had said nothing, apart from her first cry of surprise on coming into the room and seeing Soliki already there. It was obviously going to be a gloating session, with Kratt enjoying the increasing confusion of his victims. What would happen afterwards was anybody's guess. Karl's fate was sealed—had probably been sealed for a long time, awaiting an opportune moment such as this. She hadn't much hope for herself. The Secs didn't usually release political prisoners.

The voice of the radio announcer sounded through the metal grille of the intercom unit—and a few seconds later Matrix 24 was under way. It was typical twenty-first century music—weirdly modulating atonal chords and discords, devoid of melody or form, interwoven with phantoms of rhythm and implied rhythm that failed to establish any kind of metre or time. Intellectually it was absorbing—like a conundrum or a problem in higher mathematics, but emotionally and æsthetically, it was sterile and unmoving.

For ten minutes the tones and half-tones meandered meaninglessly; then, suddenly, there was a short break, followed by a sound never before broadcast on any radio or video channel in the technocrat world—the sound of chords being struck on a piano—a pre-Inferno piano. Then came the rhythmic lift of eight beat boogie pounding out to the whole world on the Rainbow Network.

Soliki listened intently for half a minute, then said: "You see, Commander Kratt—they can't cut the transmission, because my men have taken over the transmitters."

Kratt smiled triumphantly. "On the contrary, Soliki, your men are all either dead or under arrest. The transmission continues on my orders."

"Why?" demanded the other.

"Wait and see."

At that moment the boogie faded into silence. There was a pause—an uneasy silence that quivered electrically in the room—and then the announcer's voice said: "We apologise for a short break in transmission, which was due to the unauthorised insertion of pre-Inferno music into Matrix 24. Bax Borden, the composer, is already under arrest. A substitute programme will be broadcast in approximately one minute."

Kratt stroked his chin thoughtfully, looking from Soliki, who was smiling ironically, to the girl, who looked bewildered, to Major Rondo. The latter raised an eyebrow enquiringly, and stood up, moving casually away from his superior officer.

"Looks as though someone has slipped up," Rondo remarked.

Kratt said nothing, but his hand moved leisurely to the pocket of his tunic. He withdrew it with incredible rapidity, and pointed a small, glittering pistol at Rondo. But the latter had moved too. Even as Kratt's arms tensed for the recoil of the weapon, Rondo had fired through his pocket. There was no explosion—only a quiet "phut." Kratt's chest seemed to open up into a crimson crater as the expansion slug buried itself in his lungs. He collapsed, without a murmur, spreading blood over the desk and the carpet.

"Nice work, Major," said Soliki with enthusiasm. "But that places you in a spot."

Rondo smiled grimly. "It had to come sooner or later. Tonight was bound to bring a showdown."

Zora turned to Karl with wide, uncomprehending eyes. "I don't understand. What goes on?"

"It's all right, darling. Rondo is one of us. He's one of the few Reversionists we've got working inside the Bureau."

She closed her eyes—a gesture of relief. "I would never have imagined . . ." she began, but the videophone buzzer interrupted her. Rondo pressed the switch, making sure that no sign of Kratt or his blood was within the angle of the monitor tube. The familiar face of the Director of Radio and Video Services materialised on the blank screen.

"Is Commander Kratt there?" asked the Director.

"No, I guess not. He went out a few minutes ago," Rondo replied, blandly. "What's the trouble?"

"It's about Matrix 24 and the arrest of Bax Borden. We're getting thousands of protests from people all over the world. They're demanding his release. They are demanding a repeat of the pre-Inferno music. All the videophone channels are jammed by incoming calls."

Rondo grinned. "Good," he said. "That's the reaction we expected."

"But what am I supposed

to do?" demanded the Director.

"Nothing at all, until you get instructions from Commander Kratt."

"There's something else. The Reversionists are attacking the Tower at ground level. There's a pitched battle going on between the Security Guards and the rebels, and the way things are going it looks as though we're going to lose the Tower. Those Reversionists are vicious, and they mean business. There's a couple of thousand of them, all armed. Some of the guards have deserted."

"Is that so?" Rondo remarked. "Well, if I were you, I'd clear out. Things look rather ugly. I'll ask Kratt what he intends to do about it."

"All right," said the Director, unhappily. "I'll take your advice and clear out. I only hope everything is going to be our way." He closed down in a hurry.

"So far, so good," Soliki observed. "The next stage is the annihilation of the Citadel —which means we've got to get out of here in a hurry before the helio capsules go up."

Rondo glanced at his watch. "We've got nearly twenty minutes. Now listen carefully, Karl. I'm going to escort you two out of the main gate. Travel by velo-track to Reversionist H.Q. Get reinforcements sent to the Video Tower. I've got work to do here. Bressler himself is in the Admin building across the way, and a lot of the big technocrat stars. We'll catch them all. Before I leave, I want to destroy the Index—just in case of accidents. They've got about twenty thousand names listed as Reversionists, and sooner or later they'd all be wiped out. When I've done that little job, I'm going over to the Tower to assist in the assault. Follow me."

Rondo led the way down to Room 24, where a coat was found to cover Zora's grey prisoner's uniform. They were not challenged, even when passing through the main gate, with its double check point. Rondo's rank was an effective passport to freedom, and he always said

the right thing in the right tone of voice. He accompanied them to the nearest velo-track subway entrance, and there they exchanged brief goodbyes. His eyes followed them a little sadly as they disappeared down the escalator, arm in arm, then he turned back towards the doomed buildings of the Citadel.

There was a female clerk in the Index room, but Rondo sent her away on an imaginary errand. Then, working swiftly, he tore the long, narrow drawers from the steel filing cabinet, emptying the small rectangular cards into a heap in the centre of the floor. This completed, he took out his pistol, removed the clip of expansion slugs, and fitted a new clip of incendiaries; then, with cool deliberation, he fired six times into the mass of index cards.

In a few seconds the whole floor was ablaze with licking tongues of flame, and white smoke filled the air with asphyxiating fumes. Rondo backed out of the door, surveying his handiwork with sober satisfaction. And then, unexpectedly, a voice said: "I've been looking for you, Major." He swung round, raising the pistol, and saw the astonished face of Lieutenant Pope.

"What the hell . . .?" exclaimed the Lieutenant. Comprehension flickered in his eyes. He took in the angry smoke pouring from the half open door of the Index Room, then looked at Rondo's grim face, and the tense finger quivering on the trigger of the pistol.

"You—Rondo—of all people!" he said, almost in reproach. "Kratt's been murdered—and my guess is you did it, then set fire to the Index. You're a Reversionist agent . . ."

His hand moved swiftly to his tunic pocket—but Rondo got him first. An incendiary slug exploded in Pope's brain. For a moment his head seemed to be on fire with intense, white light, then he was a crumpled, smouldering cadaver on the floor.

There were footsteps at the end of the corridor. Rondo spun round, his heart sinking

in desperation. Three uniformed figures were bearing down on him with measured determination, pistols at the ready. There was no escape that way, and the other end of the corridor was a blank wall. The only possibility of getting out alive lay in going through the flames and smoke of the blazing Index Room and jumping through the window—a drop of four storeys to the ground. It was a fifty-fifty chance—perhaps less than that—but there was no other alternative.

Swiftly he ducked into the pungent fog, and found himself confronted by a barrier of flame. The fire had spread—and it seemed as though everything in the room was burning fiercely. For a moment he hesitated, debating the best route through the fire, and in the same instant the door crashed open. Rondo knew then that the end was near. He turned and fired simultaneously, dropping one of the guards with the first shot. The other two fired together. One expansion slug hit Rondo in the stomach, almost cutting his body into two separate halves; the other struck him full in the face, shattering his head into clinging fragments. There was no pain, no final thought, no awareness of death—he simply ceased to exist.

Karl Soliki and Zora found themselves with plenty of work to do at Reversionist Headquarters. Coded reports were coming in from all parts of the continent and the world, providing valuable statistics that gave an encouraging picture of the progress of the civil war. Shkargo had fallen to the Reversionists, and a number of other important centres were already in rebel hands. The final gesture of defiance remained to be accomplished.

It happened right on schedule. From the windows of the room they saw the night sky of Nyok burst into incandescent whiteness, slowly fading to angry orange and then crimson. The shock wave came seconds later—a titanic shuddering of the air and the ground that smashed windows in a vast circle. The Citadel had vanished; only

a smouldering, radioactive crater remained of what had been the seat of the technocrat government. Bressler was gone—together with the leading lights of his autocratic adminstration.

Almost immediately the videophone buzzer sounded. Karl took the call, fading up the face of one of the Reversionist leaders, flushed with excitement and triumph.

"We've got the Tower," he announced happily. "We're mopping up the rest of the Secs now. I'll report fully later."

"Good," said Karl.

He turned to the girl. "Well, darling, it looks as though we're winning through."

"Yes," she replied, in a rather tired voice. "I wonder how Major Rondo made out? I hope he got away in time."

"Don't worry—he knows how to take care of himself."

"I wish I'd known he was one of us . . . I wouldn't have hated him so much at the interrogation."

"Rondo couldn't help you there, darling. He had to play his part. Did they treat you rough?"

Zora shook her head slowly. "Not exactly. The first six hours were the worst—supersonics and the rest."

Karl took her gently in his arms. "There won't be any more supersonics for anyone—not the way we shall run things. No more intolerance, secret police and persecution."

"Time will show, Karl," she said, simply. "There have been so many Bresslers and Kratts throughout history . . ."

The videophone buzzer sounded again—stridently and almost triumphantly. Karl pressed the switch eagerly. "I've been checking up, Soliki," announced the smiling face on the screen. "We're in possession of the whole building, with more than six hundred Sec prisoners. The rest are either dead or on the run!"

"Good," said Karl. "Get on the air and announce the inauguration of the new Reversionist state without delay. Announce it as a *fait accompli*."

"Okay, Soliki. I figured on that. We're all ready to start. We planned to open the transmission with part of Matrix 24—you know, the

pre-Inferno music with the hypnotic rhythm."

"The boogie? Sure—do that."

"Say—that reminds me. About Bax Borden. I've got bad news for you. When they tried to arrest him—just after they faded out Matrix 24—he put up a fight. They shot him dead."

All Karl could say was: "I'm sorry about that." He felt a vague stirring of conscience. Borden had got dragged into the maelstrom against his will—but it had to be that way. It was the web of fate.

"Well, I'm closing down now," said the other. "Switch on your radio. We're going on the air in about thirty seconds."

The screen went blank. Mechanically Karl walked over to a large radiovision console and turned a switch. Then he crossed to where Zora was standing by the window.

"Any regrets?" he enquired. "About Borden, I mean."

She slipped her arms around his neck, smiling strangely. "No, Karl. No regrets. If I was able to give him a little happiness, then I don't regret that either."

"Well," he said, softly, "there's just the two of us now."

"That's how I like it," she replied.

From the radio came the crashing chords on the piano, and then—the solid, rocking rhythm of the fragment of twentieth-century music which, in all innocence, had launched and won a revolution.

STF plotting in 3-D

by Charles Eric Maine

author of the play-book-film **SPACEWAYS**

A STORY—science fiction or otherwise—can be put over in three ways. It can be seen—as on a TV or cinema screen; it can be listened to—as on "steam" radio; and it can be read—as a book. And if an author happens to hit on the right story line, he can exploit all three dimensions of entertainment. *Spaceways* is a case in point.

It all began as a germ of an idea some three years ago. Supposing the first man to take a rocket into space wasn't a scientist motivated by an abstract desire to add to human progress. Supposing he was a man—a technician of some sort, obviously—with an entirely different kind of motive. And supposing that motive was the result of some ordinary non-scientific human drama taking place on the rocket site where he was employed.

George Hills, hero of the radio play-film-book, *Spaceways*, puts it this way as he lies on the G-mat of rocket S.R.2 just two minutes before take off. *Look, Mac—if I don't come back—that is, just in case of accidents, I'd like to put on record that I'm not doing this for any heroic or scientific motives, but simply to clear my name from a murder rap. Will you remember that?* This short speech contains the essence of the story, which is fundamentally a murder mystery set against the background of a rocket development site in Nevada, U.S.A., where a giant satellite rocket is being built.

When Hills' wife and a fellow scientist disappear from the site at the time of the launching of the rocket, the F.B.I. come to the conclusion that they might have been murdered by Hills, and their bodies stowed in the rocket. There is technical evidence to support this theory. In due course Hills is tried, but he escapes conviction by volunteering to pilot a second rocket equipped to bring back the first, in order to prove his innocence. He takes off—and the rest of the story follows inevitably

ON THE AIR

The broadcast presented a number of problems, the biggest of which were sound effects. In the second take off scene six different records were mixed to simulate the rocket noises; they included a V2 launching, a jet running up, a turbine on load, general machinery noises, an electronic whine, and a light breeze (this was the final sound of the rocket fading into silence). In addition, the sound effects required immediately prior to take off included a buzzer, a 'phone bell, an electronic timing pip, and a master clock's ticking. In the end, to avoid mishaps, the whole sequence was pre-recorded.

Just as well, too, for during one of the final runs-through at rehearsal the count-off got mixed into the wrong record, and it sounded like this.

KLEIN. Stop the rocket! Kill it dead!

TIME CHECK. Five.

KLEIN. Understand? It must be stopped!

TIME CHECK. Four.

DISPERSAL. Did you say stop . . .

TIME CHECK. Three.

DISPERSAL. . . . the rocket?

KLEIN. Yes!

TIME CHECK. Two.

DISPERSAL. It can't be done . . .

TIME CHECK. One.

KLEIN. But it must . . .

TIME CHECK. Zero.

At this point the rocket should have taken off with a tremendous roar, but what came over the monitor speaker was the sound of lively music fading into a nasal voice which said: *In yesterday's bantamweight fight for the world title a knock-out in the third round signalled a win for youthful challenger Tex Delaney of Los Angeles . . .!*

Very few changes were made in the script. The trial scene in the courtroom, originally reported over a radio newscast, was dramatised. Said producer Archie Campbell: *Two invaluable ingredients for any radio play are court scenes and dialogue over intercom or R/T. They sustain listener interest.* Sound advice from one of radio's best sound producers.

A few small cuts were made. For instance, the following lines were dropped from the interrogation of George Hills by F.B.I. agent John Keenan:

Hills has just been asked if he has any children, and he says "no."

KEENAN. By choice? Or in spite of?

HILLS. Is that meant to be a crack?

KEENAN. Were you childless by choice, or by fate?

HILLS. I don't see how my sex life can be of interest to the F.B.I.

THE SCREENPLAY

The film *Spaceways* was made last winter by Exclusive Films of Wardour Street, starring Eva Bartok and Howard Duff. Although it is still on general release in the U.S.A., it has been screened at a few cinemas in this country. It may, by the time this appears in print, be on the circuits over here.

The first thing the movie people did when they got hold of the script of the radio play was to change the names of all the characters. George Hills becomes Steve Mitchell. John Keenan becomes a man called Smith. McCabe, the computing officer, is now Lisa (Eva Bartock)—still a computing officer; his sex is changed so that Mitchell can fall in love with him (her) and so provide additional love interest. Besides, Lisa has to go up in the rocket with Mitchell (Hills) right at the end of the film so that they can have a brief love scene in free fall

The location is also changed from Nevada to somewhere in England. And Colby (now Crenshaw) who ran away with Hills' wife turns out to be a Russian spy.

The basic plot, however, remains. The murder theme is still present, although the trial scene has been eliminated entirely. The ending of the screenplay was rewritten after finalisation: instead of Howard Duff and Eva Bartock dying a vacuum death out in space (first version) they discover an emergency wheel which, when turned, brings the rocket safely back to earth (second version) where, presumably, they live happily ever after.

The film is quite effective, and uses some good stock shots of rocket launchings to create authenticity. Two newsreel sequences

which will be familiar to stf film addicts are mixed in with the action—the one of the mice in free fall, and the superb shot showing the booster unit falling away from the main rocket body during flight.

ENTER THE NARRATOR

For the novel it was decided to introduce a narrator to relate the story from his restricted viewpoint. There were two reasons for this: narrating a story in the first person can be a distinct aid to plausibility, particularly in science fiction; and the device lends itself to the introduction of additional characters and sub-plots without overloading the main story line.

The problem of converting a radio play into a novel is basically that of material. A radio play is the sound equivalent of a longish short story, not a full-length book. The radio script as it stood occupied forty-three pages, but at least 300 sheets were needed for the book.

The characters had to be drawn more fully, and given backgrounds. In addition, there were new characters, tying in with the main plot, but helping to broaden the canvas. And, finally, the story had to begin at a different point in time—some months before the first rocket launching which started the radio play. Only in this way could the history of the satellite project and the nature of the romantic triangle situation be adequately outlined.

IN THE BEGINNING

The three versions of *Spaceways* all begin differently; they all end similarly (at virtually the same final situation, if not the same relationship between the characters).

The opening of the radio play was in a pattern now becoming all too-familiar. The script said:

> *Fade up the distant roaring sound of a large rocket of the V2 type being launched. The sound rises to a crescendo, then fades slowly into silence. A clock is heard ticking steadily in the background.*

The dialogue then outlines the satellite project and introduces without delay the two main twists on which the plot depends—the partial failure of the rocket, and the disappearance of the man and woman from the site.

The film opens like this:

> 1. *Main titles and Credits (effects shot). A background of stars and planets.*
>
> *Fade out. Fade In:*
>
> 2. *Ext. Moorland; day (2nd unit location). Long shot of desolate stretch of moorland. A car is in the far distance and moving towards the camera. At this extreme range the car appears to be some sort of delivery truck, black and windowless . . .*

The car comes to a halt in the wilderness and three men get out to recover the remains of a small rocket. They remove the camera unit—and a mouse that died in free fall—and return to the rocket development site, where the script slowly moves into the basic story line.

The novel starts months before the first launching when Conway, security man at Washington, is sent to the Nevada rocket site for reasons he does not understand until much later in the story.

The film ties in with the general war phobia surrounding astronautics, as the following dialogue sequence illustrates. Two high officials are discussing the satellite project from a policy viewpoint.

> MINISTER. It still sounds fantastic to me. To build, more than a thousand miles up, a . . . a space station . . .

GENERAL. Have you considered the position if we lose the race to get there first?

KEPPLER. An observatory that will at last pierce the secrets of space . . .

GENERAL. And will keep every part of the globe under constant surveillance . . .

KEPPLER. A stepping stone to the moon and the planets . . . to whole new worlds.

GENERAL. And, if need be, a launching platform for atomic weapons . . .

KEPPLER. I hope we'll never have to use it for such a purpose . . .

GENERAL. But it will be available if necessary . . .

In contrast, the radio play was naively unmilitary. Dr. Klein, chief scientist, when issuing a statement to reporters simply said:

> *At precisely 04.17 this morning—a little before dawn—we launched the first experimental rocket to ascend into interplanetory space and remain there . . . in preparation for the exploration by mankind of the moon and the planets—the solar system itself. This is but the—er—the first hesitant step on the stairway to the stars . . .*

The plot of the novel is substantially that of the radio play. The film is a law unto itself, but it would not be quite fair to say that any resemblance is purely coincidental. The title, after all, remains the same.

THE CENSORS

by

J. F. Burke

Illustrated by Davis

Humans had something . . . and one of the Masters thought it was good . . .

The High Predictor was getting old. Nearing the end of his ten thousand years, he was becoming slower in his decisions. The Acolyte was far too awed to allow any direct criticism to creep into his own mind; but somewhere in the back of his thoughts was a vague idea that the great man was getting rather feeble.

There was all this sentimentality over that little planet, Earth, for example . . .

"I shall be sorry," said the High Predictor, "to give up my work. Dissolution comes to all of us, and I am not complaining. But I am sorry. Sorry not to be able to watch over the destinies of those human beings down there. Their progress has been fascinating, you know—truly fascinating."

"Yes, Eminence," said the Acolyte, respectfully. "To have watched over them for so many generations——"

"I shall always be glad that my interest was aroused in this corner of the galaxy. So many of my colleagues, you know, wanted to dismiss this little solar system as unimportant."

"Yes, I know." The Acolyte had heard this story more than once.

"It looks so small and unimposing, does it not? It is nothing, compared with the powerful systems of Aldebaran or Betelgeuse. Only one inhabited planet—not worthy of our attention, you might say? But the work I have done on it in my spare time has more than repaid me. I have become very fond of this world."

The Acolyte tried not to look shocked. Affection for the races under the guidance of the Predictors was a thing to be frowned on. Personal detachment was one of the first laws.

He said, tentatively: "There are few possibilities of development, are there, Eminence? Earth will not at any time threaten the balance of the galaxies in the way that Antares did; and its philosophical systems show no sign of producing the fruitful

possibilities that we have known in Maberge."

"No," conceded the High Predictor, indifferently. "That is perfectly true. But here we have another element—a striving that is different from the communal expansion of Antares. The group mentalities have not been developed here. There is still a fission of racial thought, a . . . a loyalty to individual concepts——"

"Mental anarchy," said the Acolyte.

"You are too harsh, my son; too dogmatic. It may be that the unassimilated yearnings and strivings of these puny creatures will produce something of purer merit than the controlled world-brains of other systems."

The Acolyte looked sceptical. Young he might be, but he had spent five hundred years in the Faculty of Guidance, learning to accept the responsibilities of a Grade 2-S administrator, and in that time he had been taught not to look favourably on the erratic development lines of individualistic communities. Most of them came to a bad end unless carefully controlled by the Predictors. And careful control meant dispassionate judgment, detachment, remoteness. There was no room for sentimentality.

Yet the High Predictor, tracing out the pattern of intersecting lines on the development charts before him, was smiling. The Acolyte watched him close his eyes and sit back, projecting his authority, focusing and concentrating. And still smiling. It was as though he leaned over and listened, paying attention to one separate, particular person for the sheer irrelevant, irrational joy of it.

Gavin Doust said: "If that's the way you feel about it, why don't you get out?"

"If anyone gets out, it's going to be you," said his wife.

"You started this——"

"*I* started it? You've got a nerve. First thing after we get back, you start in on me."

"Only because of the way you behaved with that cheap hick from Mars."

"A cheap hick, is he? Listen to me, Mr. Gavin Space-freight Doust . . . That

man's built up one of the best freight lines between here and Mars, and made every dollar the hard way. He's knocked about and seen life in the space ports, and he's interesting to talk to. And that's more than I can say about some folk I know."

He looked down at her auburn hair and her smooth shoulders. He supposed he must have loved her once, but it was impossible to recapture any echo of that lost passion. The two of them were strangers. No, not strangers; strangers did not hate one another with the persistent hatred of constant proximity.

He said: "It's not my fault I'm Metab-4, so that I can't get out into space."

"Nobody said it was."

"I don't fancy being compared with someone who just happened to be lucky that way . . . and unscrupulous in just about every other way. And what I said still goes. If you think he's so wonderful, get out of here and go to him."

"You can't act civilised, can you?" she sneered. "Why don't you take it easy? I've never interfered with your behaviour. If you want to get yourself someone interesting——"

"I don't go in for that sort of thing."

She laughed harshly. "You might be a lot more interesting yourself if you did. Anyway, it's only because you're too much of a prig. I saw the way you eyed that dark girl."

"The only dark girl there was the daughter of your Martian millionaire."

"She's his daughter? How nice. You ought to concentrate on her. Then you'd have a rich wife *and* a rich——"

He slapped her before she could utter another word.

"So?" she said, breathlessly. "She's made quite a hit with you, hasn't she?"

"Keep your mouth shut," he said, hearing the bitterness in his own voice and hating everything that had put that bitterness there. "You didn't buy me. I didn't marry you for your money and I don't hang around other women for their money."

"All right, all right," she said. "But this house was

bought with my money, and don't forget it. Don't tell me to get out of it, because I don't like that sort of talk. Cool down and act sensible."

"The only sensible thing I can do," he said, from the door, "is to walk out and go off in search of my self respect."

"Good hunting," she said.

He slammed the door and went out on to the boulevard. A helicab skimmed the trees and settled down three blocks away. The dying whine of its flexion drive clashed in Gavin Doust's head with the echoes of his wife's voice. He felt a great surge of resentment because of all the happiness and beauty and brightness and sweetness he could never hope to have; and the clamorous echoes drowned the noise of the surface truck that came swiftly round the corner as he stepped off the sidewalk.

"They do have so very much to contend with," said the High Predictor, compassionately. "It does seem such a shame that their multitudinous afflictions debar them from attaining the higher levels of abstract thought and creative activity. Look at that unfortunate man, now. What has he done to deserve such a fate?"

For the fraction of a second his mind engaged with that of the Acolyte, and they retreated into the timelessness of pure contemplation. Only it was not, to the Acolyte, as pure as it ought to have been. There were disturbing overtones. The High Predictor's thoughts were blurred by emotion. Affection, of all things!

The older being became aware of the younger's instinctive revulsion. Why waste time on a tenth-level race? the Acolyte was soundlessly asking. At once their shared mind flooded with the response to the situation. Factors were marshalled, influences considered . . . and yet the contemplation was still not depersonalised. It was as though the voice of the High Predictor went on speaking affectionately, persuasively.

"So very much to contend with . . . How can one not feel sorry for them? Some of

them unable, for physical reasons, to travel through space without contracting the interplanetary 'bends,' as they call them; all of them racked by fears and complexes, petty jealousies and personal ambition; their lives together wrecked by maladjustment. If it had not been for our intervention, would any of them have survived to this day?"

The Predictors had turned their attention towards Earth after the second Fission War. The High Predictor himself, stirred by the challenge of coping with a society of unco-ordinated beings such as they had not met in their whole experience, had directed the work of guiding and the gradual elimination of disruptive elements. There had been no more wars. Existence vectors were studied, and the converging probability paths analysed. A potential dictator was removed by the watchers, the self-appointed cosmic stabilisers. Certain ideas were implanted in the minds of those milling human beings—meting out the same treatment that the Predictors had given to so many galaxies, so many widely differing races. The Predictors hoped to lift this small group out of its squabbling confusion to a plane on which it might cope with broader issues.

For the Predictors there would be no reward. Only the satisfaction of work well done. No awareness of their existence must ever seep into the minds of the lesser races whose course they fashioned. Gently and unobtrusively they shaped and limited the future of the cosmos.

"If an individualistic race such as this ever realised that there was such a control," thought the High Predictor, "it would at once revolt. They are stubborn, these people. We must be careful. I can only hope that my successor will not be too formal in his approach. It is easier to make a mistake with these apparent primitives than with the worlds possessing a corporate mind."

"Little harm could be done," thought the Acolyte, anxious to be finished with these particularities and to sink into the all-embracing contem-

plation that brought such rapture. "They are insignificant. They cannot touch us."

"I am not too sure. They have imagination and initiative. Without the cumulative reasoning of a corporate mind, they nevertheless established interplanetary travel, and they already have their eyes on the stars."

"We could eliminate that, for their own good."

"We could." There was a strange, sad reluctance in the High Predictor's mind. "We have held them back from so many things . . . for their own good, as I have assured myself. Yet the more I know of them, the more I wonder whether they are not the potential masters of the cosmos."

"They are barbarian adventurers who would devastate all our carefully maintained world systems."

"Yes. And yet they would bring a certain sense of adventure . . . freshness . . . glory . . ."

The concepts tailed away into uncertainty.

The High Predictor was old. Far, far too old, thought the Acolyte. His values were warped and his critical faculties no longer clear.

"Look at that unfortunate man," the High Predictor commanded once more. His interest reached out to that figure apparently frozen on the edge of the sidewalk, waiting to step off towards death. "I have glanced at him before. He was a man with great talents that he did not use. There were so many possibilities for him. Now he is tired, weary, because of his wife and his own failure; and he is going to die. Obviously he is going to die, is he not?"

"It could have been foreseen"—the Acolyte was resigned and almost disrespectful—"if we had taken the trouble to evolve the appropriate intersections. But it is not our custom to evaluate all individual life-lines."

"I feel it is wrong that a man of that calibre should die, while his worthless mate continues on the Earth. I believe I should alter the course of events."

Shock boiled up in their consciousness. The Acolyte

revolted violently. "It has never been our policy to interfere when a major issue is not involved. Personal detachment——"

But already the mind link was breaking. The High Predictor was emerging from contemplation into action. Gavin Doust moved forward from his frozen position, and then was plucked back on to the sidewalk.

The Acolyte said: "No. You have not checked the co-ordinates. You don't know what effect this will have."

"I find myself strangely interested," said the High Predictor, defiantly. "Interested in happiness—in people rather than in abstractions."

"What the devil was that?"

Gavin Doust pushed himself away from the tree against which he had been flung. The surface truck hummed past a couple of feet away.

What thought had twitched his nerves and muscles into action so swiftly, throwing him clear at the last second? He hadn't heard the truck coming; hadn't seen it, even from the corner of his eye; but some impulse had driven him to twist aside and finish up with a painful jolt like this.

The truck stopped a little way up the road, backed, and turned. A man got out of the cab and tossed a small parcel towards the goods acceptor flap. Then he climbed back in again.

Gavin heard his own front door open again. Or his wife's front door, if she wanted to insist on having it that way. She came out and looked over towards him.

"Gavin," she said, uncertainly. It was as though the word had been pushed unwillingly out of her.

She walked quickly towards him.

He began to say: "It's all right, I'm on my way, don't let's start a mushy reconciliation scene," but although she must have heard him, she did not respond. She looked at him—came towards him—and swayed to one side for no reason, and went stumbling out into the road, under the wheels of the returning truck.

That was that. She was dead.

The driver got out, cursing with fright. Gavin could not move.

"Hey, what's the idea? She threw herself under the wheels. It wasn't my fault, d'ya hear me? Look, bud, you saw her . . . it wasn't my fault."

"No," said Gavin, blankly. "It wasn't your fault."

Perhaps the fault was his own. If he hadn't walked out . . . But you could keep going a long way back before you fetched up against what started it all. If he hadn't walked out, if she hadn't driven him to desperation, if he hadn't been too idle to assert himself all the times he should have done . . .

If he hadn't married her . . .

Well, that was over, anyway. He felt more bitter and despondent than ever, his mind soured by the feeling of waste—waste of a slice of his life and hers, and then the throwing away of her life like that.

But it was a despondency that couldn't last. The world continued to revolve, days and nights and weeks flickered away, and the planets performed their looping circuits about the sun.

The planets.

He couldn't reach them, but in a way he got close to them. He saw the daughter of that Martian millionaire again. And again. Several times. He married her. She brought with her as dowry a grant from her father that would enable Gavin Doust to make all the experiments he cared to make in controlled extra-sensory perception. Indeed, he would have married her without a penny, because she brought him confidence and love and enthusiasm as well.

"That's what I've always been driving at," he said to her, during a lull when he wasn't telling her he loved her. "I *know* there are untapped reserves in our brains. We possess talents and faculties we don't begin to understand."

She nodded and laid her hand on his.

"It's been realised for centuries," he went on. "But nobody's ever got down to work on it. And the people with a glimmering of real awareness have either mis-

directed their talents and polluted them, or else been frightened out of using them because of the jeers of so-called scientific sceptics."

"How are you going to investigate the problem?" she asked, fondly.

"How?" He laughed. "I don't know. I don't know where to start, because there's never been any coherent line of research up to now. Dabblings, yes—but no more than that. I'm not going to fool around with playing cards and scribbles on paper."

"What, then?"

He shrugged with happy derision. "I tell you I don't know. All I know is that I get intimations of the power in myself. I seem to be on the verge of hearing things—I'm like a tuned circuit that is darned nearly oscillating, only it's more complicated than that. It's exasperating; you feel you've only got to shake your head to clear it of all the atmospherics, and you'll hear someone saying something quite clearly to you. And sometimes I get the impression that I've got something to transmit; I send out a message, and wait for an answer . . . but there's nobody at the other end. Sounds crazy."

"No, it doesn't sound crazy."

"Maybe there aren't any answers. Maybe I'll get tired of trying, and give up, and——"

"No, you won't," she said, firmly. And she meant it, and the strength of her reassurance was like new life to him. "I know you'll never give up. I believe in you."

The months had passed like seconds before the gaze of the watchers. The High Predictor exuded contentment; the Acolyte was radiating a most unethical exasperation. But then the whole thing was unethical by all their standards.

The Acolyte said: "Eminence, there is danger here. We should check——"

"There is no need for a check. That man will not unravel the secrets he longs to comprehend. It is a pity——"

"A pity?"

"For him. Not for us, of course. He has a high sensitivity—all the potentialities

are there—but he will never realise them to the full. These embryonic talents are infuriating to their possessors; they will always be aware of frustration, of being near to some indefinable goal; but I know that I am right in saying that for this man there is no possibility of attainment."

"It is as well that it should be so."

"It is well," conceded the High Predictor. "And he will not be unhappy. This marriage will be a successful one. He will strive; and for this peculiar race an aimless striving is often more conducive to happiness than achievement would be."

"And now, Eminence, is it time for you to instruct me further in the diffusion of contemplation?"

They withdrew their attention from the insignificant Earth.

"I don't like the way he looks at me sometimes."

"It's strange," Gavin Doust agreed, "but I think you're letting it worry you too much. It's only a—well, an expression he has."

His wife shook her head uncertainly. "For a boy of his age to stare so knowingly at you . . . so contemptuously . . . it's not right."

Gavin took her hand. "He certainly isn't old enough to understand the meaning of contempt, so don't let it get you down. He'll be all right. He's thinking, that's all."

"Thinking?" she echoed. "Yes, and I don't think I'd like to know what he's thinking about. He stares at me as though he were reading my mind——"

"I wish he were!" Gavin burst out. "That might give me a lead. If our own son were telepathic . . . but what's the use of talking?"

"Sssh!"

He frowned at her nervousness. It was stupid of her to be so jumpy. Anyone would have thought that she suspected their four year old son of being able to hear every word they had said about him; and now, when they heard him running along the upstairs landing, it was as though she feared what he would have to say to them when he came down and into the room.

Brightly, jocularly, Gavin

called out: "Is that you, Russ?"

The boy came in. His large, solemn eyes stared up at his mother and father.

"Hello, dear," said his mother, unsteadily.

"Hello," he said, without emotion.

It was true, thought Gavin, that the boy did seem to look at you oddly—not beyond you, not through you, but *into* you. His eyes widened ever so slightly, and it was true that a most unusual smile curled the corners of his lips. Gavin made an effort to keep his own gaze steadily locked with that of his son.

Was it his imagination, or could he feel something prying into his mind? He experienced a sensation like that of stealthy fingers moving delicately, probingly, through his thoughts and over his consciousness into all the acquired knowledge stored up in his memory.

With the maximum possible intensity he directed a thought out towards his son: *Can you hear what I am thinking? Are you telepathic? Answer me. Answer . . .*

He could have sworn that mockery flickered in the eyes, but there was no answer.

Aloud, Gavin said, abruptly: "Can you hear what I'm thinking, Russ?" It was a challenge and at the same time a plea—a heartfelt appeal for honesty, for help in his life's work.

Russ smiled an innocent smile. "Can some people hear what other people are thinking, pop? That must be great. Gee, you'd learn a lot that way, wouldn't you?"

Gavin nodded sadly. Yes, you would learn a lot that way. And he remembered how quickly Russ had learnt to talk, and what unusually long, yet always accurate, words he had acquired from heaven only knew where.

It was one of the most fascinating and most alarming aspect of the telepathic faculty. He had often wondered what it would be like if the human race began to develop the faculty, as he was sure it could be developed. As soon as a child had passed its most primitive state of babyhood, it could start where its parents had left off; it could take into its mind, lock, stock and

barrel, all that they knew, and could sort it all out for its own use. The progress of the race —socially, technically and psychologically—would be incredibly accelerated.

But there would be complications. Children were self-centred and ruthless. They might, all too easily, acquire material knowledge without the moral awareness and judgment that came only with age and experience. It might not work out like that, but then again it might. A child might be only too ready to despise its parents after having rooted about in their minds and sorted out what was useful to itself, discarding the rest as so much unworthy junk.

Gavin looked at his son. And Russ looked back, a plump-featured boy of four, with a mature and disturbing smile chasing in and out of the corners of his mouth.

Before the ceremonial moment when he ejected his personal consciousness and allowed it to be dissipated, never to be reclaimed, the High Predictor made a routine check of all the records that had been under his immediate jurisdiction. He was satisfied with Antares and amused by the solemnity of the Alpha Centauri experiment.

He turned to the small charts of development on that one inhabited planet in the system that had, for a short time, captured his fancy.

And he murmured: "Surely not. No, that seems most improbable."

The Acolyte studied the converging lines and uttered the equivalent of a cry.

"Something strange there," said the High Predictor. "Our computors must have made an error."

"Have they ever been known to make an error?" demanded the Acolyte, impertinently.

The High Predictor ignored him. He turned his attention back to the Earth, at which he had not glanced for over ten years now. Down he went, seeking out the family whose existence depended on that whim of his.

There they were. Gavin Doust and his wife—still in love. And still happy? Yes, in their way, despite the un-

easiness that their ten-year-old son caused them.

Their son . . .

The alarm that sang through the High Predictor's aged mind struck a resonance in the mind of the Acolyte.

"What is it? What is wrong?"

"The son. He is conscious. He knows!"

They seemed to be looking into the boy's eyes, and they knew at once that he saw them—saw into them. For a moment they felt the greedy probing of his consciousness as it reached out for theirs and robbed them . . . and then, swiftly, they withdrew.

"He must be eliminated," said the Acolyte, decisively.

"I am afraid that is so," said the High Predictor. "I committed a great mistake. It must be rectified at once."

He brooded over the scene that had once given him so much delight. Then he summoned his energies, gravely requested the Acolyte's help, and suddenly drove down with all his force into the boy's mind. Russ was on the flat roof of the house, peering over at the path below. He would lean too far, go down, head first.

You will lean over, lean over a bit more, push away slightly with your feet . . .

And in their minds they heard his laughter. He thrust away their suggestions, effortlessly.

"His parents!" said the Acolyte. "We must influence his parents so that they kill him . . ."

"To lead one member of a race into crime against another is against our laws."

"In an emergency——"

"Even in an emergency we cannot fly in the face of such a law. And I can assure you now, my son, that it would be a fruitless endeavour. The boy is aware of us, and will evade us. We have always known that for anyone to know of our presence would be to overthrow our power."

The Acolyte became angry. The High Predictor had reached the end of his term of office and could surely be defied now.

"If you refuse to act, what will happen?" snapped the Acolyte.

"I have no doubt," re-

sponded the other, "that in due course this puny race will make itself master of the stars."

"We will throw the corporate minds of all the star systems against them——"

"That, too, is against our laws. We do not promote enmity between one system and another."

"It may come to that."

"Yes. Yes, I believe it will come to that. I believe this is a challenge that will reduce all our laws and philosophies and plans to nothing. One child on Earth is *aware* of us—and that is the beginning of the end. If you like, I will predict it for you. I will resolve the equations right to the end——"

"There is no need," said the Acolyte, brutally. "It will be the duty of your successor to do that."

"You are right. But I know what he will find. He will find there is a new element in the cosmos. He will find that these small creatures have a challenge to offer the Predictors—and that they will be the eventual masters."

The Acolyte stared down with hatred. Hatred—an emotion that was frowned on in the high councils of the cosmic watchers. Hatred for this first spark that was to become a flame.

"That child's awareness," said the High Predictor, tired, yet somehow happy, "is the beginning. The stasis we have achieved can no longer be maintained. You will see. They are creatures made for struggle and defiance and achievement—and they will not be turned back."

FILM REVIEW

DONOVAN'S BRAIN

By H. J. CAMPBELL

Forrest J. Ackerman, who is on first-name terms with Hollywood's biggest stars, took me to the studios to see a special showing of this film while I was in Los Angeles as a guest of the Ackermans.

With an unassumed air of familiarity, Forry wafted me past the guards, through a couple of barn-like sound stages and into the small, lush private theatre or projection room. There I met the producer of the film and several of the men who had put the picture together. We talked for a while and then out went the lights and the picture came on.

The credit titles made it quite clear that the film was based on a story by Curt Siodmak, though when I met him at a party that night he told me he wished they hadn't. He was not too pleased with what they had done to his story. I had to disagree, feeling that as a science fiction film (rather than simply as a film) they had made a pretty good job of the available material. My main complaint was that they should have chosen a story with a more modern and less hackneyed plot—though it was not hackneyed at the time of first publication, of course.

For those who are not conversant with the story I will outline it. The main character is a doctor of science who is also a medical man and who is interested in what has now come to be called tissue culture methods. Up until nearly the opening of the picture he has had to be content with working on animal tissues. He is especially interested in the culture of nervous tissue in his private laboratory, tucked away between the mountains, where his dutiful wife, one-time nurse, aids him by taking notes and clearing up the mess he makes.

Comes the day when a plane crashes nearby and seriously injures the passengers. One of these is in too bad a state to be taken to hospital and is rushed to the doc's home for an emergency operation. This is performed, but doesn't do any good; the passenger dies. The doctor decides that here is a complete human brain, just dead. A great temptation and one to which he falls. The brain is removed from the man's dead

body and is installed in culture apparatus and connected to an oscillograpb affair that makes the brainwaves visible. We get to hear that the man is Donovan, a millionaire.

So the doctor keeps the brain alive and tries to communicate witb it telepathically. This he does. So much so that the dead man's mentality takes over completely and turns the doctor into a kind of schizophrenic, who parades around carrying out Donovan's will—which is rather involved but concerns great financial affairs, including tax evasion. The "disembodied" Donovan realises that he must kill anyone who stands in his way—and this means his wife, among others. Just as he is about to do so, lightning strikes the house and destroys the brain in its antiseptic tank. The doctor is taken away by Internal Revenue agents to answer charges connected with the obscure financial dealings, but we are left witb the impression that it's all going to be all right.

Of course, with old stuff like that it is very easy to create a melodrama. This is not wbat happens in the film. Given that the producer cannot entirely avoid the limitation of the plot. he has made a good job of presenting this rather fantastic story witb credibility and dignity. He, or someone, slipped up in tbe matter of laboratory equipment—whicb is of the usual childishly stupid kind—but be managed to get the actors to play their parts naturally; indeed there is a kind of European understatement to the presentation which is all to the good. I would have liked the various financial machinations to have been made a little clearer, but this may be a fault of the English economic system and be quite obvious to Americans.

I think I would recommend you to see this film, though it is by no means a first feature and cannot compare in dramatic incident witb such classics as *When Worlds Collide*, *The Day the Earth Stood Still* and *War of the Worlds*. It hasn't the colour, the glamour or the action of these films. But it may do more to spread the gospel about science fiction than they will. Anyway, go see it and tell us wbat you tbink about it.

Science can be inhuman at times even when dealing with essentially human affairs—like having babies

TWENTY-FIRST CENTURY MOTHER

by Katherine Marcuse

The punched card weighed heavily in her hand. It meant so much . . . but there was no other way. She knew that. She'd thought about it . . . thought a lot . . . since that morning . . . that terrible morning . . .

The slacks wouldn't fasten around her swelling waistline. Fine. Mike didn't like women in slacks anyway. With a pleased smile, Amuri kicked them off and pressed a button that brought a soft, blue statelectric gown from the dress dispenser.

Mike would like this, though. She could hear him moving about in the next room, getting her breakfast out of the quick-thaw cabinet. Dear Mike, she thought, tenderly, up to the ears in work at the lab, but still he had time for something like that.

She moved to the door and smiled at him as he pulled out her chair. "You'll have to pull it out a good deal farther than that soon," she laughed.

"Ummmm . . .?"

"You're thinking," Amuri accused. "This is breakfast. No meconium till 9.30. No medusæ. No meroblasts. Just us, remember?"

He smiled absently. "Okay, sweetheart. New juice this morning. Like it?"

"Um," she said, doubtfully. "It's different. A mixture. Papaya . . . a little pomegranate . . . or are you pulling a synthetic on me again?"

He grinned. "Yep. The latest thing in peptised protein with a dash of Mike-made citramins. Good for you. So are eggs. Eat 'em!"

Funny, they tasted different. They had yesterday, too, she remembered.

For a moment her stomach rebelled. Good heavens! What was it she'd heard about in old wives' tales—morning sickness? But of course not!

There hadn't been a case of that for years. And she'd taken her pills just like the rest of them.

Still, she mused, if I'd lived in those days I wouldn't have minded the sickness. Not much anyway. Just as I won't mind getting big. I'll like it. I'll be pleased and proud.

She sighed with contentment and slipped her plate towards the incinerator slot in the centre of the table.

"What's the matter?" Mike asked, sharply. "Why don't you eat your breakfast?"

"I've had enough," she answered, lazily. "I guess I'm just not hungry."

Mike was staring at her, hard. "*Eat* it!"

"Well, see here now. I'm not going to starve the child, but there's no reason why I shouldn't miss breakfast once in a while. The doctor doesn't make a point of it——"

"No, but I do!"

She caught her breath. He'd acted a bit like this yesterday. "Mike—what is it? What's on your mind?"

"All right. If I tell you, will you eat it?"

"Yes, of course I will, darling. Anything you say. But what's the matter?"

"Well—I guess it's near enough time now——"

"Time? What time? If you're talking about the baby, you know as well as I do that it's a good six months——"

"Ah, that's what you think!"

"Mike! What do you mean?"

"Just this, darling. I haven't told you how things are going at the lab lately. You didn't seem to want to know."

"*Yes*, go on."

"Well——" he said, exultantly, "we've been doing all right!"

It sank in. Slowly. He's succeeded . . . but he didn't rush home to tell you . . . there's more to it . . .

And suddenly Amuri knew. She was staring at the golden mound of eggs, funny-tasting eggs; the drop of reddish amber juice in the glass; juice that seemed sweet yet left a bitter taste on the tongue . . .

"Mike! You haven't—you *couldn't* have been feeding me the same stuff!"

"Why not?"

"That's why things've been

tasting so funny. You've been dosing *me*—same as your monkeys and rabbits!"

"Why not? We've got it solved!"

"Mike!"

"You know the results we've been getting already with human embryos, even two months' ones——"

"Yes, I know—when a woman dies in an accident, you've brought the embryo to term. I was proud of *that* part of your work——"

"Well, now we've mastered the metabolite removal. All we've been waiting for was to be sure we had the right solution to the problem of toughening the water sac and controlling the delicate osmotic potentials——"

"Mike, for heaven's sake stop talking jargon and tell me what's going to happen!"

"We've found the solution. We can set up an artificial environment that *improves* on nature. Because it's foolproof and under constant automatic control. There's an electro-analyser in the circuit that gets a continuous feed-back from the detectors in the development tank. It's got 300,000 valves, Amuri. And that many can't be wrong! The only thing that could go wrong is if the analyser were fed another problem simultaneously. Its circuits wouldn't stand it. But nobody'd do *that*——"

"I see. And now what's going to happen?"

"I'll give you a capsule of oxytocin when it's time—not too long now. The new hormone will interact with the others you've been having and—well, the whole thing will be over before you hardly know about it. No pains, no confinement. It'll be as simple as it is in chickens."

"You mean——" She strove for a comic effect. "You mean —I'm going to lay an egg . . . ?"

"Nope! *You* don't even have to bother with the shell gland!"

Humour left her. "And you didn't want to tell me? You didn't think—you should ask me?"

"In a way—but if you'd been nervous, the stuff wouldn't have upset you, but the thought of it might have."

"I hope it does upset me! I hope it spoils everything!"

"Amuri!"

"Why not? You and your wretched mechanical science! Oh, the way you're going life's becoming no *good*——"

"Just a *minute*. You don't need to get hysterical—just because you're pregnant. That's the kind of thing I'm freeing you from!"

She clenched her fists, fighting tears. So now I'm hysterical. Hysterical and sentimentally old-fashioned. Yet this is only a symbol, one part of a terrible whole . . . the one place where I can say: Stop, this is for women to decide . . .

"Look, Mike! If it meant a chance to be creative in other ways, all right. But things aren't like that any more. This is the one chance I've had to feel in harmony with natural processes."

Mike said, soothingly: "I've *got* to get over to the lab now. Take a walk and calm down. Then come and look at the machines. You'll see I'm right. And look—try to think objectively for once. Okay?"

He was gone.

But I can't think like that, she thought. I can't. I can't feel like a scientist, blindly driving ahead, not caring how new discoveries are used. I've got a blind drive of my own . . .

A very satisfying one. Yesterday she'd sat in the sun under a tree, her hands limp in her lap. She had thought with a rush of joy: "I'm creating—even when sitting still!"

Well—no more. Not much more, now that Mike had given her the stuff. Then the machine would do the creating . . .

Two weeks later it happened, as he planned. She didn't want to see it, and Mike agreed with her. "Best not," he said. "To me it's beautiful already. It's the most exciting thing in the universe! But you're twentieth century, darling. I'll tell you when he's cute enough for you."

But she did see it—in her mind's eye. Snatches of Mike's lab talk came back to her. The tank, the bubbling fluids... the cell-thick membranes, the pulsing redness, the grape-

vining nervous system, the calcifying bones.

And over it all a monster thing of electronic circuits, contact breakers, grids and flashing lights.

She sat in the garden. Without an electric seamer. Just a needle and thread. She took a stitch in the pale pink cloth on her lap, let it fall. It was good metalastic material. The one layette would do for all her children—her great-grandchildren, probably. Perfectly resistant, it would never wear out, never look old, never look dirty. Science in everyday life!

But pink. "Of course, it'll be a boy," Mike had said. "We'll be able to tell in a day or so. Maybe today." And it would be a boy. Everything seemed to go as Mike planned . . .

Amuri let the material fall away from her as she thought of him, her son. Pictured him as he might be, the things he would do and say. Her son.

No. Not her *son*. Not now. Her *problem*.

The sun was right above her, she noticed. They would all be at lunch now. Time to do what she'd planned. What she'd thought about constantly since that terrible morning. Time to do something for the instinctive ones, something to get down beneath Mike's scientific crust, to make him see . . .

The tiny pink garment lay, forlorn, on the grass as Amuri walked away. Towards the machine, the towering machine . . .

. . . she lifted her gaze from the tank to the analyser. She fed in the punched card, the simultaneous problem that would wreck the circuits. Her own problem. But she knew the answer. The only true, human answer, even if it were not the logical one. For she was a mother, not a machine.

Fanzine Reviews

by H. J. Campbell

This month we are, in the main, dealing with American fanzines, because we would like to see a great deal more interchanging of these publications, with a resultant spread of understanding and friendship between the two largest groups of science fiction fans. So we hope those readers interested will join the subscriber lists of these inexpensive, interesting little booklets.

DESTINY is an extremely well produced fanzine of some thirty-two lithographed pages put out by Malcolm Willits and Earl Kemp from either 3477 North Clark Street, Chicago, Ill., or 11848 S.E. Boulevard, Portland 66, Oregon. It contains mostly articles on science fiction, with a few stories and poems here and there. The illustrations are very good, well-drawn and properly printed. Many photographs, too. Subscription is one dollar for four issues (25 cents a copy).

COSMAG, from Ian T. Macauley, 57 East Park Lane, N.E., Atlanta 5, Georgia, is a varicoloured fanzine, printed on art paper, with large size pages containing articles, stories, features and readers' letters. British subscription (3s. 6d. for four issues) should be sent to Derek Pickles, 22 Marshfield Place, Bradford. Stateside subscription is $1.25 or 25 c. a copy. A quite good fanzine, but would be better with some illustrations, especially since the paper is of high quality.

SKY HOOK comes out quarterly from the Fantasy Amateur Press Association, 2215 Benjamin Street, N.E., Minneapolis 18, Minnesota. It has been running for five years now and is very well worth the 15 c. a copy charged for it. In the main it contains articles that are elevated and informative, about fandom and science fiction affairs. This fanzine is for the serious fan.

SCIENCE FICTION NEWSLETTER is a quarterly pamphlet of some twenty pages, lithographed and with many fine illustrations. It is put out by the well-known American fan-turned-pro author, Bob Tucker, who uses his fine abilities to ensure the items he includes as newsworthy. His comments, too, are worth reading, for Bob has been in the game a long time. British subscriptions (5s. 6d. for four issues) should be sent to Ken Slater of Operation Fantast. The American address is Post Office Box 702, Bloomington, Ill. Stateside subscription is 20 c. a copy or 75 c. for four issues.

FANTASTIC WORLDS seems as though it hardly rates the title fanzine. It is so well produced and carries such high quality material that it seems nearer to a professional magazine. Maybe that is why it costs 35 c. a copy ($1.00 for four issues). British subscriptions should be arranged through Ken Slater of Operation Fantast. This fanzine is published by Sam Sackett of 1449 Brockton Avenue, Los Angeles 25, California. He makes a superlative job of it, and we can confidently recommend it to our readers.

SOLZ is a somewhat peculiar, duplicated fanzine, put out by the Drill Press Publications, 914 Hammond Road, Ridgewood, New Jersey. It contains nothing but articles on science fiction stories, fandom, personalities and suchlike. Both illustrations and text could be better produced, but the content is of standard quality. Subscription is 50 c. for six issues or 10 c. a copy.

QUESTIONMARK is an Australian fanzine, and a very welcome one too. Edited by Bruce F. Heron from 4 Myrtle Grove, Preston, Victoria, Australia, it contains about thirty-two pages of articles and stories, with fantasy included. There are no illustrations, but the material is of quite high quality. British subscription rate is 10s. or 9d. per issue. They do not say how often the fanzine is published. Stateside subscription is $2.00 or 15 c. per issue. Australian subscription is 12s. 6d. or 1s. per issue.

SCIENCE FICTION NEWS is another Australian publication, this time a single sheet (four pages) lithographed affair put out by G. B. Stone, Box 4788, G.P.O., Sydney, N.S.W., Australia. It contains snippets of news from the whole world of science fiction and fandom. Subscription 6s. a year.

KIDS' GAME

by

FRANK QUATTROCCHI

Would-be conquerors of Earth beware!

Humanity does not live by logic alone . . .

Illustrated by Muller

Twelve-year-old Philip White slid awkwardly down the gravel embankment and touched his foot on the steel rail, to find it in the deepening shadows. He shot a quick glance to his right down the dark track, his pale face catching the mournful light from a street crossing far above.

No, there wouldn't be a train from that direction until 9.05, when the night freight left for Shelbina.

He stepped up on the rail, waved his arms for balance, then began walking. He fought down an impulse to look back toward his house before it finally disappeared from view behind the thick, dry brush along the tracks.

Gradually he lengthened the periods before he lost balance and had to step down onto the rough wooden ties. He took satisfaction in this; walking the rail kept the gravel out of his shoes and would fill the long walk with something of challenge.

For a while he allowed himself to imagine that the rail was a thin cable between two tall buildings, and that instantaneous death awaited a single mis-step. But the fantasy was rather childish, and dwelling on it with any degree of attention made his steps nervous and slow.

He became aware of house lights filtering through the brush to either side of the tracks. His own house would be lit up by now. Tonight was family night, a pleasant little tradition his mother and father insisted upon.

His six-year-old brother would probably be building a house of cards and even the little baby would still be up. Normally they would be asking him to play a Bach prelude or perhaps a group song on the spinet.

But he must miss family night.

Too bad he had not been able to think up a better excuse. The homework one was not good—maybe they did not even believe it entirely.

He partially lost his balance on the rail. Striving to use one foot to regain it he caught his shoe in the cuff of his jeans. He stumbled off the rail, pitching forward toward a shadowy clump of bushes. Somehow he did not go down, however.

and he quickly sought the rail again.

It did not do to indulge such thoughts. They diverted him. The boy set his small, boyish chin and irritatedly rejected the childish regrets.

"*Hey!*"

Phil started. The sudden voice had issued from the intense black behind him. He stepped from the rail and scanned the shadows momentarily. Then he broke into a cautious run on the gravel.

"*Hey, you!*"

A tramp, probably. There were no cars on the siding, hence no railroad detectives... He ran on, searching the brush for a trail leading back up to the street above the tracks. A muffled oath came from behind him, followed by shuffling, heavy footfalls on the gravel.

Suddenly the boy tripped. He slid on the gravel and went down. He rolled his body toward the brush and quickly gathered his knees up under him. Then, perceiving that the footsteps were very close, he quieted his breathing and hid his face under his jacket.

A shadowy hulk approached, outlined faintly by light from a far, away street light. It hesitated for a moment, then hovered over him.

"Kid, huh? Runnin' away."

The boy did not answer. He braced himself and stared up at the huge figure. Gradually he managed to suppress the childish terror that filled him. He tensed his small body to subdue ripples of nervousness and fought the welling tears that threatened his vision.

The tramp's huge chest was heaving from the short run. Perhaps he was dulled by alcohol . . .

"How much money . . . *Why, you little . . .!*"

The heavy kick into the boy's side warded off the action before it could be set into motion. Phil rolled, groaning in pain and rage, against the sharp, brittle brush.

"I haven't anything . . . any money," he whimpered. "You had better let me go."

"You're runnin' away from home. You got money—give me!"

"I told you I haven't any—you better let me go—I can kill you easily."

A guffaw greeted the words. The huge bearded head shook in laughter. A heavy foot nudged his chest.

Instantly Phil grasped the ragged, muddy shoe, meanwhile rolling his body to bring his legs under him. Then, lifting with his back and leg muscles, he gave the tramp's leg a wrenching twist. The man went down heavily with a savage scream of pain.

The boy moved in, his hands clasped tightly together, palms open. But he stopped and stared down at the impotent giant.

"I should kill you for a stupid criminal," he spat. "I can do it, too. But that broken ankle is enough—you won't tell how you got it."

Fifteen minutes later he squeezed the crude door latch and noiselessly pushed in the wooden door. The adolescent voice he had heard as he approached the railroad shack paused, its owner regarding him with irritation.

"You're late, Phil. Have trouble getting away from mamma?"

"A tramp tried to rob me."

The thick-set boy of perhaps seventeen sneered and turned toward other seated boys of various ages. "Our baby-faced member seems to attract such incidents."

There was a flutter of boyish laughter. Phil blushed as he took a seat on the rough floor among them.

"As I was saying, the *Manual* prescribes that when the average age of the members reaches fourteen years, *Phase Two* will be considered entered . . ."

"*Phase Two*—what's that mean?" demanded a red-haired boy near Phil. "We gotta go to school or something?"

The older youth smiled at the interrupter. "Frankie—you'll like this. You won't want to play hookie from Phase Two. According to the *Manual*, it is time we prepared ourselves physically for what ultimately lies ahead."

"You mean like baseball?" demanded Frankie.

"Naw—he means like Judo," said another, smaller boy.

Phil frowned. Why didn't they let the leader continue?

His heart beat faster in anticipation of what was coming.

"Neither of those," continued the older boy. "Since you haven't read the *Manual* —you couldn't understand it yet—I'll have to put its language in terms you boys can understand. Phase Two will be semi-military . . ."

"Oh, boy!"

"But before you summon up visions of some kind of non-Terran West Point, let me say that it will mean a great deal stricter discipline than we have had in our little gang so far."

There were expressions of dismay.

Discipline? What did that mean? Phil motioned one of the boys to silence and received a vulgar gesture in return.

"We will conceive and execute assignments. For example, the *Manual* suggests that we try to gain entrance to a rocket assembly plant . . ."

"But . . . we can't . . ." sputtered Phil, involuntarily.

The leader frowned at him intensely. "Philip—the rest of you . . . you'll have to be quiet. You've assigned me Reader of the *Manual* because I'm older and can translate it into Terran child's English. Now you're going to have to let me talk—any objections?"

He scanned the six faces belligerently. No one objected.

"As I was saying, tonight's meeting marks the beginning of Phase Two. Presumably——" He cast an amused look at Phil. "Presumably the next two years or perhaps three will see us all reach adolescence. From this point we will work together on specific assignments as teams or—if you prefer—*squads*."

"What for, Jake? Why can't we keep the gang?" asked a boy.

"Because of a curious psychological phenomenon of which you are not aware. As you know, we have taken full advantage of the fact that at our age boys—and presumably girls—tend toward gang orientation within their own sex.

"Terrans *expected* us to want to form gangs. After adolescence, however, the expectation is the reverse."

At that moment one of the boys released a toy car. The

car buzzed for a moment, then leaped into action. It raced to the centre of the room, threatening for a moment to hit the motionless foot of the speaker. Then, at the last moment, it swerved and returned precisely to its owner.

"Are you finished?" asked the older boy, acidly.

"Yeah—didja notice how it came back to me? I control it—see? Radio control unit."

The boy displayed a tiny metal box.

"Ingenious," said the other. "Probably a reflection of your unwillingness to enter the level of maturity I have indicated."

The boy blushed and put away the toy.

The leader returned his shifting attention to the group. "Furthermore, I feel I oughta warn you of another psychological phenomenon. You all know that I am a . . . that I have passed adolescence. Now it may surprise some of you, but I find myself increasingly attracted to members of the . . . opposite sex . . ."

There were a few small 'aughs in the room. The boy blushed. Then he narrowed his eyes.

"I must warn you to take with seriousness what I say. For I assure you that *I can lick any of you with one hand tied behind my back!*"

At Play period Phil started to leave. His hand was on the door when an adult voice called behind him. It was that of Jake, the leader.

"Better stick around, Phil. You can use some of this—therapeutic, you know."

"I—think I'd better go, Jake. This is the night the family has a . . ."

"All the same, you'd better stay. There's more to Play period than having fun. I think you will find it instructive."

The boy took his arm and gently, but firmly, led him back into the room.

Two boys of about fourteen or fifteen pored over a thick book, borrowed from a lending library. A half-grown youth, who yelled periodically to the rest in a half-adult voice, practised rolling falls on the rough floor.

Phil joined a group of

youths watching the boy with the radio controlled auto. As he watched, the toy performed intricate and amusing manœuvres around the broken box furniture. It backed up, raced around in tight circles, and skidded to realistic stops.

"What time is it, Jim?" Phil asked an intense young boy near him.

"I ain't allowed a watch, Phil. Last time I ripped one apart they took it away from me before I could put it back together again. I was four."

The explanation was unnecessary. Phil remembered that the boy had told the same story five or six dozen times before.

Suddenly the toy car veered crazily from the centre of the room and came to an abrupt stop against Phil's outstretched foot. Startled, he drew his foot back. The others laughed at him.

Then he kicked out again in anger, nudging the thing back into the centre of the room.

"Hey!" cried the owner, aggressively.

But Phil had risen to his feet. He walked away from them and approached Jake. The youth had been standing apart from the others, watching them, amusedly.

"What time is it, Jake?"

The older boy produced an expensive pocket watch. "It's nine seventeen, plus or minus fifteen seconds."

"I have to go," Phil said.

"Stick around—just calm down a little. I'm going to show the kids a new trick with a loop of piano wire. Learned it from my uncle—he was a Ranger in the war, you know."

"Jake . . ."

"What's the matter with you, Phil? Your folks riding you?"

"No!" The denial carried more strength than was needed.

The other boy stepped back in exaggerated reaction. "Don't get sore, Phil. I didn't say your dad was a horse thief."

"I'm sorry . . ."

"You have to learn to deal with the adults. It's our most important objective at this point."

"Jake—when do we get beyond this . . . this kid's stuff? These kids' games. When do

we actually prepare for the—*Landings?*"

Jake narrowed his eyes and set his mouth. "*Never discuss our objective here. Never!*" he snapped.

"I . . . I . . ."

But the older boy softened. "All right, Phil. We're all anxious to . . . get on with it. But our first job is to grow up. To grow up as natural, normal Terrans—your body is entirely that of any other kid your age, you know."

"Yes . . ."

"And, like I was saying tonight, so are your emotions. If you feel you need some therapy . . ."

"No," sighed Phil. "It's just that—well, what will it be like when we . . . ?"

"We aren't permitted to ask that, Phil. We will do what we can to make the transition period easy for Terra."

"And it will be good, won't it?" urged Phil, almost eagerly. "The *Coming of* . . . will be good for Terra."

"You must never, never doubt that," Jake said, levelly.

A chilly wind caught Phil as he pushed aside the brush and stepped up on the top of the embankment and faced the dimly lit street. The late autumn air pierced his thin jacket and blew at his unruly blond hair. His house, he noted, showed a single, dim light in the living room.

This was not good. It was short of ten o'clock, but too late for a school night. Late enough, perhaps, for his parents to have called George Stacy.

Normally, of course, they would not call. To do so might imply that they did not trust him. And yet—if he were very late they might rationalise away the apparent breach of trust . . .

Breach of trust! He was thinking in terms of petty Terran morality again. It was simply unfortunate that he had had to lie. Usually he did not have to. Never before had the meeting fallen on family night. Tonight he had lied simply because there was no way to avoid it.

He paused outside the house to stamp dust and small gravel off his shoes, then he climbed

the creaking wooden steps and opened the front door.

His father stirred in the big chair under the floor lamp and regarded him sleepily. "Oh, hello, son. Must have been dozing."

"Hello, dad. I'm late getting home . . ."

"Your mother went off to bed. I stayed up to read your book. I'm afraid I dozed off in the middle of it."

The book lay, half-open, on the floor. It was the Jeans book on the universe.

The boy moved across the room and stood over the furnace grate, letting the ebbing warmth rise under his jacket. He noticed that his shoes had picked up traces of white from the gravel and that he had cut several threads at the elbow of his jacket. He looked away from them quickly, to find his father regarding him with a very faint trace of concern.

For a moment there was silence between them. Phil knew that some kind of explanation was expected of him. He searched his brain for some innocuous remark.

"Getting colder out, Phil?" asked the father, yawning.

"Yes, sir—uh, did you like the book, the Jeans?"

The man retrieved the book from the floor, then smiled at his son. "Very interesting—you haven't taken up astronomy in school yet, have you?"

"I've read some books . . ."

The man reached into his trouser pockets and produced a package of cigarettes. Lighting one, he said, casually: "Those boys you meet occasionally—they're interested in astronomy too, aren't they?"

The boy stiffened. A cool feeling grew suddenly in his stomach. "Yes," he said.

"I remember you said they were considering building a small reflector."

"Yes." The boy's thoughts raced.

The father grinned. "Well, I was talking to Bill Simpson today, down in the shop. You know his son, Gregory, don't you? Bill and Gregory made a little six inch scope some time ago. What I was thinking is that—maybe I could draw up plans and Bill could help with the lathe work . . . I mean . . ."

Phil relaxed, the tension gone. He realised with a pang of guilt that he had been defending himself against a sincere attempt by the man to be kind and fatherly . . .

"That would be swell, dad; —it would be—swell."

For a moment he fought back a welling pain in the corners of his eyes. He bit his lip . . .

"Perhaps," continued the man, "you could get in touch with Gregory about it. He could tell you some of the troubles he had."

Phil had seen the boy's telescope. It was crude, even to the heavy machined castings. Yet, somehow, he now remembered the childish instrument with a vague longing . . .

"Gregory might even make a good member for you kids. You could invite him to join your group."

"Gregory's too young!" snapped Phil, defensively. "He's too . . . well, he's too young."

"He's your own age, son," said the man, quietly rising from the chair.

Phil squirmed in his seat and considered putting up his hand for permission to leave study hall for another book. But he had done that twice before. Chances were Mr. Fiegespan would refuse him.

He sighed and cast a long look out of the window. It was a gloomy, utterly dull and boring day. Earlier, sheets of grey rain had slanted down over the athletic field. Gym class had been held indoors.

He heard a low hiss near him.

"Did you get that water problem in maths, Phil?" whispered a light, eager voice beside him.

He turned to face the girl, Shirley.

"Why . . . no, no, I didn't," he said, confusedly.

The pretty girl frowned, looking away from him shyly. "I can't get it at all . . ."

He should probably open his maths book and try to find the problem. But the thought of it chilled him. He ignored her.

Water problem. Silly problems, long lists of stupid books, superficial courses—the things he was allowed to know were

so utterly and hopelessly limited . . .

Phil left school with Gregory Simpson tagging along. He knew of no simple, direct way of getting rid of the eager child.

"I'm doing variable star studies with my scope—would you like to see it now that I've got it painted?"

"How do you go about variable star studies?" Phil said, evasively. "You can't have very much equipment."

The boy brightened at the faint show of interest. "We do them, though. Several of us kids. I'm doing Mira just now. What you do is try to compare it with the brightness of some star you already know."

"But Mira has been precisely measured," put in Phil.

The boy frowned slightly, then brightened again. "The observatory in Los Angeles always gives us Mira to start on. When you get good at it they give you a different one."

"How accurate is your parabola?"

"Huh?"

Phil fought his impatience. "How accurately did you figure your mirror?"

"Oh, gee, Phil, I don't know about that. My dad sent it in to the observatory and they said it was all right to go ahead with. Anyway, I don't think it matters much on my mirror. The focal length is pretty long. Would you like to see it? I painted it up real slick . . ."

"I've got to get home now, Greg. Maybe some other time."

Phil hurried on away from the boy. He suppressed a feeling of shame at the look of disappointment on the other boy's face.

He had just finished working the absurdly simple water problem when his mother called him to the 'phone.

"You won't talk too long, will you, dear? Supper is nearly ready."

"No, mother."

"And, Phil——" she hesitated. "We'd like you to stay in tonight."

He waited until she had disappeared around the corner into the kitchen.

"Listen, Phil, something's come up," said the adolescent voice on the other end of the

line. "You've got to come—I don't care how. If you don't *I might flunk my math.* So come."

A click sounded in the receiver.

The brazen message shocked him. Never before had Jake been so direct. It was downright dangerous to drop the code phrase so abruptly.

Dazed, he walked into the dining room and took his accustomed seat. What did it mean? Two nights in a row—unprecedented.

His father was busy making faces at the baby in her high chair. His mother entered, carrying a steaming plate of potatoes.

"Dad, that was Gregory. He wants me to come over and see his telescope tonight."

The other looked up quickly, then peered out of the window beyond Phil's chair. "It'll be a bad night for it, Phil," he said. "Completely overcast."

His mother had paused in setting the table. She looked at him for a long moment, then resumed her job without saying anything.

"We aren't going to look at the stars, dad. And I won't be outside. I was just going to make some sketches of Gregory's mounting. He said he'd help me."

There was a long silence. His mother left the dining room. His father did not look directly at him. He seemed thoughtful.

"Your mother and I were hoping you'd stay home tonight."

"Are you going to build a telescope, Phil?" spoke up his six-year-old brother.

Phil continued to stare searchingly at his father. He would actually have to go to Gregory's. He would have to produce a sketch. But what else could he do? The telephone message was sufficiently urgent.

"Can't you answer your brother?"

Phil turned to the boy. "Yes, Gerry, I hope so." He turned back to his father. "Dad—Gregory invited me over tonight. He already has his homework done and so have I. I told him I'd come."

"You can call him back and say you'll see the telescope tomorrow."

"Dad . . ."

Phil's mother had taken her seat. She stared at the father.

"Son, do you feel you must go out tonight? You can't postpone seeing . . . Gregory's telescope . . . till another night?"

"No."

His hand raced over the piece of paper. It was simplicity itself, but it took time —valuable time.

"Don't you want to see the mirror, Phil? Here, I'll take it out of the tube."

"No, Gregory, don't bother. I just want to make a sketch of your mountings."

"But . . . you aren't going to use *that* mounting . . ."?

That was certain. It was cruder even than Phil had remembered it. Nevertheless, it was necessary to have the sketch when he went home.

Actually it would be easier, and better, to use pipe. Gregory's father must have made the simple project a labour of love . . .

"There, Greg. Sorry I can't stay longer to see your mirror. But dad wants me home early tonight."

He gathered up the messy papers, jammed them into his jacket and quickly left through the boy's outside entrance.

Once in the darkness outside some of the tension and impatience left him. He was free! There were two, possibly three hours before he must be home. During those precious hours he would be with the gang, with others like him, with those who shared his destiny.

The gang. It was wonderful to be going to them. He bitterly resented every moment he had spent in Gregory Simpson's silly company. Just as he resented school—dull, vacuous school, the dreary childish concepts, the childish gadgetry and small thoughts, the banal preoccupation with baby explorations and vulgar wonderings . . .

He made his way quickly down the dim street, breaking into periodic runs to conserve his breath. He reached the railroad tracks and moved down them toward his objective.

Maybe something big was up. Maybe *those who are coming* — the non-Terrans — had decided . . . what was it the *Manual* said?

Other races are watching. Terra is not alone among the stars in providing a home place for life and sentience. There are other systems around other stars. There are better intelligences . . .

How well he knew that! In the great loneliness he felt now—and always—how he longed for communion with those intelligences! How he longed for maturity and peace—peace from the contradiction that periodically raged within him. The contradiction of an alien intellect implanted in a slow, Terran body . . .

How would it be when *They* came? None of them knew in detail. But they all knew that it would be an end to the loneliness . . .

He passed the spot where the tramp had challenged him. He almost regretted the undisturbed silence there. This time he would have killed . . .

What was he thinking? It was not necessary to kill or destroy anything. It never would be. They had been assured of that. You just immobilised ignorance, stupidity, immaturity. Took away its power. And that was what they would be doing when *those who were coming* arrived . . .

His poor parents! If only he could tell them about that. If only he could convey to them the utter importance of what he was doing and what he *would be doing* . . .

But, of course, he could not. Even now, far away from his parents, physically, he felt that peculiar constriction of mind that always came when he considered telling them anything at all . . .

It would be almost like being a normal kid his age—like Gregory . . .

"Listen very carefully and don't interrupt," said the leader. "This is a matter of unique urgency."

The usual nervous sounds in the room ceased immediately. The six youthful faces stared intently. A boy gently, but firmly, quieted a squirming puppy that was licking at his fingers.

The leader paused to produce a dirty newspaper clipping from his pocket.

"Do any of you remember the boy that Philip White

here introduced to us when we were first forming six or seven years ago?"

Stephen Clary! Good Lord, he had not thought about the boy for years. Phil's heart beat a little faster. He looked around and saw that the others did not remember Stephen.

"We considered the possibility that he was one of us," continued the youth. "He moved away to New York with his family before we could be sure—do you remember him, Phil?"

Phil nodded.

"Good, Philip. I vaguely remember him myself. I think we decided at the time that he was simply a very bright youngster, but not . . . like us."

One or two of the others mumbled vague recollections.

The leader held up the newspaper clipping. "Listen to this: 'Boy injured in wild leap from train. Twelve-year-old Stephen Clary sustained multiple fractures late last night in a wild plunge from a passenger train which was taking him to see a local psychiatrist'."

Phil stared. *Stephen Clary——*

"'The boy, described by his father, Henry L. Clary, as an extremely bright but highly emotional child, fought his way past railroad porters and passengers to plunge from the speeding train as it neared the city outskirts. He was picked up, dazed and severely injured, a short time later. He resisted all who came near him until he lost consciousness. A trainman who helped subdue the hysterical boy quoted him as screaming that "the future of Terra depends upon me." The twelve-year-old's father said he was bringing his son back to visit a psychologist who once before treated him for delusion and hysteria. He said the boy had tried to run away from his New York home "time and time again," apparently headed for boyhood friends here'."

A stunned silence fell upon the group. The leader carefully folded the newspaper clipping and slipped it into his shirt pocket.

"It is obvious that Stephen Clary must be prevented from seeing the psychiatrist."

"Why?" demanded Phil.

"He can fool the psychiatrist just as we've always done. We've all taken ink-blot tests . . ."

But the other shook his head. "Not after the leap from the train. He will be considered suicidally inclined —desperate. Eventually the psychiatrist will use shock or deep narco-therapy on him."

"Not necessarily," protested Phil, without quite knowing why he defended the boy he had not seen for years.

"You knew Stephen Clary well, didn't you, Philip? It was you, I recall, who maintained that he was one of our species."

"But . . ."

"I commend you for your perception." Turning to address the others, the older boy continued: "It was a regrettable mistake. Perhaps if we had known we could somehow have prevented his going to New York. Or made it easier for him to live alone without our help—perhaps we could have maintained contact with him.

"Apparently we have lost a great mind. Somehow it appears this boy managed to deduce his identity—and even ours. It would seem that even his very sketchy acquaintance with us was enough. But that is not important now."

"What . . .?" began Phil. The others maintained a shocked silence. The puppy squealed in its owner's arms. The boy quickly covered its small mouth with his hand.

"Do you concur in my feel- that Stephen Clary must be— *silenced?*"

They stirred and avoided meeting each other's glances.

"Jake—maybe we could try hypnosis, like we did on each new boy that came in." The boy who had made the suggestion evaded the leader's look and lapsed into silence.

"Stephen Clary is probably under guard at the hospital. Hypnosis, such as he would require to silence him, would have to be given in a whole series. Even then he could not be trusted to resist shock treatment."

There were no more comments. Phil sat in a daze, overwhelmed by the implication of what the youth had said.

"Then I take it we have a concensus."

"I . . . I . . ." began Phil.

"Yes. I was coming to you, Philip. Since you alone knew him well and could gain admittance to his hospital room . . ."

"Wait . . . I . . .!"

"*Yes*, Philip. It will be simple, painless, safe. In a little piece of peppermint . . ."

"Wait, Jake!" pleaded the boy. "I . . . you never said anything . . . the *Manual* doesn't . . . not *murder* . . ."

"No childish sentimentality now. Philip, your intellect must dominate in this. You've got to get over your baby ways. The *Manual* emphasises again and again the principle of absolute secrecy. Normally there is no threat to it. None of us has the power to divulge what we know—even if we wanted to do so. But Stephen Clary has not been a member of the gang. He hasn't had training or therapy with us. His hypnotic indoctrination is nil. He has only what was given him as an infant at the hospital."

"But Stephen was my friend . . ."

"Think, Philip!" demanded the youth. "Can you find a logical objection? Think about the future . . . Terra itself!"

The boy wavered, the words of the leader hammering their way into his mind. For a long, intense moment Phil sought to bring the raging torrent of pent-up feelings under conscious control. The awful, primordial conflict waged—the powerful alien-induced intellect, the frail, but savagely protesting, Terran emotions.

"I must insist, Phil. Today is Friday. You *must* see him Monday . . ."

"I . . . will . . . do as you say . . ."

The gentle Sunday afternoon sun slanted its soft, yellow beams through the autumnal trees. It touched already fiery leaves with subtle brilliance and tinged bright gold the acorns and wild wood nuts. It fell at last upon surprising green patches in the sheltered woods.

The boy and his father skirted a moist, mossy stream bed and followed a pleasant, leisurely path into the woods. They paused at bird sounds

and slowed their steps nimbly at occasional sounds of small animals.

They were a quarter mile from the railroad tracks, but, thought Phil, an eternity from the abandoned railroad shack beside them . . .

"I've spent my life in this small town, Phil. I'll never leave now. Can you understand why?"

"Yes," said the boy, following with his eyes a line of geese in a patch of sky overhead.

"The walnut tree is up ahead about a quarter of a mile. There are others nearer, but I wanted you to see this one. We'll gather some of the nuts if you want to."

"I . . . I'd like that, dad."

"Good. I remember when I was a kid coming to school with walnut-stained hands. The teacher used to raise the roof . . ."

The man laughed quietly in reverie. Phil examined a fallen leaf and tried to let the quiet peace of the surroundings settle upon his troubled thoughts.

"I'm glad you wanted to come, Phil. I needed the exercise and it's good . . . to have you along."

His father put a hand on his shoulder, warmly. For a moment it remained there, and during that moment time itself seemed to stand still. The grim reality of Monday morning—the hateful necessity of that fearful appointment—withdrew . . .

But an ache grew within the boy. It became insufferable. Without willing the action, he moved away—instantly feeling a throb of regret and guilt . . .

They continued on, pausing at a large bush of bright orange berries. Phil pulled a small cluster off, stared at it through misty eyes, then crushed them, one by one, between his fingers.

"Dad . . ."

"Yes, Phil?"

His head swam. A rain of confusing thoughts shot through his mind and he could not remember what it was he had intended saying. "Wasn't that . . . a whippoorwill . . .?"

"I'm sorry," said the man, very, very slowly. "I didn't see it."

A point had been passed, a pretence partly pierced. But the distance remained and there was no bridging it . . .

"What was it, son?" asked the father, his face suddenly tight. "What was it back there—when you pretended to see the whippoorwill?"

Phil stopped as his father grabbed him by the arm. The grip was not painful, but it was hard, taut, almost desperate.

"I . . . I . . ."

"There was something, Phil. Something you were going to say. Say it! For God's sake, say it! *It will destroy you if you don't!*"

Phil's eyes filled, a great lump came into his throat. He fought hard to collect his thoughts, fought the bizarre film of confusion, the swimming mental images, the dull, dark thing—the image deep within his mind . . .

For a long time neither said anything.

"Shall we go back, son?"

"Yes . . ."

That night Phil White paced the small attic room very late. He paced the floor. He watched the slanting, cold rain pummel the grey lawns under the street light. He stared long, long minutes into his mirror. He clutched the small waterproof package in desperation.

Tomorrow.

Tomorrow, Monday, at any time after ten a.m. So they reluctantly had told him. It had been necessary to appeal to Stephen's father directly. Still it had been hard. He had recalled his very close friendship with the boy. He had pleaded. Finally he had reminded the distracted man that his son had jumped off the train in order to be with friends such as he . . .

Oh, how persuasive he had been! How persuasive even as every fibre of his body revolted, resisted, fought . . .

Fought what? Fought the logical necessity of an act some primitive Terran regarded as a crime?

As *who* regarded as a crime?

The question mocked him now. He pitted his will against the question. He willed it out of existence. He sent shafts of gleaming logic into the dark recesses of his

mind. He sought out the source of the question amid the ill-remembered remnants of his early Terran conditioning.

Conditioning! Early administered narcotic to a mind such as his! So he told himself. Conditioning for life on tiny Terra—training that would dull and turn the sharp, incisive edge of his mutated mentality. Of his thankfully alien, mentality!

Conditioning? Conditioning that cemented one's mind to a damp, musty wood, filled with silly associations and fuzzy-minded mysticism! Conditioning that chained a man to a stupid, pastoral, earth-bound past and kept a man from a shining, challenging, boundless future in the stars! In the stars!

Pulling the chain of his carefully cloaked bedside lamp, the boy fell heavily into his bed and clutched the pillow. Tearfully he remembered—remembered with a longing that lashed at his heart—the improbable reds and browns and greens and golds of the late-autumn woods. And . . . his confused, sad, father . . .

Philip White arrived at the hospital at ten o'clock sharp. The school principal had almost eagerly granted him permission to be absent from school. Perhaps he revelled somewhat in the small connection he thus had with the now-famous "wild boy from Mars."

Wild boy from Mars! Stephen Clary, sensitive, artistic, introverted. Stephen Clary, loyal friend during the terrible taut days when their fathers had been overseas . . .

"Oh yes, Philip, Mr. Clary called about you. The doctor has agreed to let you see your friend."

Would he have changed? Would the terrible secret he could share with no one have changed him?

"I'm sure Stephen will be glad to see you. He has . . . asked to see his friends . . ."

How had they met? It was a dreary, wintery day. Stephen's mother, a schoolgirl chum of his mother's, had brought him. Stephen was only four then, a pale, thin, nervous child, dressed

in much too babyish rompers . . .

"Er . . . is there something wrong, Philip? I don't believe you heard what I said."

Phil focused his eyes on the nurse. "No, ma'am. I'm sorry . . ."

The woman smiled. "You're just a bit nervous, aren't you?"

"Yes, I guess that's it. I'm sorry."

"No reason to be sorry, boy. Stephen is all right. He will be very pleased to see you."

"Yes."

What had actually happened that first day they met? They had been led to Phil's room to play. Just two four-year-old youngsters who were together because their mothers were. There had been no single act, no word between them.

Yet from the instant the door closed behind them there was a strange, other-worldly kind of recognition . . .

He became aware of the nurse's silent gaze. She had been staring at him during the reverie.

"I . . . I'm sorry . . ." he muttered.

The woman scanned his face with concern for a moment, then relaxed and smiled. She led him to the elevator and they boarded it silently, she making childish, insignificant conversation. He heard none of it.

What was it Stephen had said? "You know things, don't you? I know you do . . ."

The woman led him out of the elevator to a room at the end of the corridor. "Now remember, Philip, you must be very, very quiet. No excitement. Stephen is still a little weak—you wouldn't want to upset him, would you?"

He shook his head.

"Fine," the nurse said, smiling at him. Then, looking down the corridor, she frowned slightly and said: "Stephen's nurse seems to be away for a moment. I guess it will be all right for you to go in alone."

She stared at him closely for a moment. "Won't it, Philip?"

"Yes."

"I knew it would be you, Phil," said the thin, white-faced boy, very quietly from the pillow. His large, sensitive blue eyes shone warmly.

"Hello, Stephen."

The boy on the bed might

be the same four-year-old that had visited him eight years before. His injuries—and the rest—had stripped away any maturity the intervening years had brought. Phil felt the warmth of recognition. He felt the same communion of minds as before.

Stephen smiled wanly. "You read the newspapers . . . ?"

"Yes."

"Good, I planned it that way. *They* . . . they sent you, didn't they?"

"Yes."

"I pretended to try to escape from the train because I had to contact you—them. I hoped the newspaper would pick it up. I had to let you know about the psychiatrist."

Phil opened his mouth to speak, but could not.

"You see, Phil, I know all about—*us*. I know that we possess non-Terran mentalities. That somebody—probably a non-Terran—induced an alien mentality in us. I know we have to *do* something . . ."

Frantically, Phil turned his head toward the door.

"It's all right," said the boy. "I tricked the nurse. She won't be back for a while. Let me continue!

"I know these things because they are planted in our brains. It must be racial memory or something like that . . ."

"Stephen, I have some candy . . ." The statement escaped Phil involuntarily. He heard his own voice say the words as from a great distance.

"Yes," said the other boy, gravely, "I thought you would have something . . ."

Phil advanced toward the bed. He was unwrapping the waterproof paper . . .

"That's why I did what I did to contact you. You see, there are times when you have doubts. Once in New York they gave me something, some new drug, just before I had an operation . . ."

Phil produced the small stick of candy. He did it mechanically, without consciously willing the act.

"It's dangerous, Phil . . . *I* know. You don't have to tell me. There's something . . . *dark*—I can't explain it. I couldn't tell you this much, except that they got me under a sedative now . . ."

The boy bit his lip as if in pain. "I should have been with the gang. Maybe I should have run off sooner . . . what's it like to be with *others . . .?*"

"Here, Stephen, take the candy."

"Yes, I'll take it. But talk to me, Phil. Tell me about—how it is. It's safe here . . . tell me what it's like to be preparing yourself for—what is it? It must be from outer space. It's *got* to be. You couldn't trust anybody with that kind of power here on Terra. Could you, Phil? You *know*, don't you? You kids have got together and figured out what I couldn't—alone."

"Stephen!"

"You can't talk about it, can you? It's those sedatives. Otherwise I couldn't either. Lord knows I've tried to tell my dad often enough. Let's talk about something else . . ."

"Stephen!"

"Please, Phil, this is for always for me—just a little more time. I'll take it. Believe me . . . But let's talk about what it was like before we *knew* . . . Remember the time we went swimming in the quarry? The time you saved my life. I'm sure you saved my life. That quarry was deep enough to sink a battleship in and I was stunned from hitting my head on the bank. Remember? Do you ever go there any more—or the woods around it?"

"Stephen—don't!"

"Yes, Phil, I'll . . ."

"Stephen," shouted Phil, frantically resisting the numbing confusion that threatened his consciousness. "*Break . . . off half of that peppermint stick . . . for me!*"

At that instant the door burst open. A white-uniformed man raced past Phil to the bed. He grabbed the stick from Stephen's hand and quickly ground it to powder under his foot.

Others streamed into the room, white-faced and talking loudly.

Phil could go nowhere. He ran into white, starched clothing and pink, grasping hands. He could find a hold on nothing, could pit leverage against nothing. Arms encircled his chest, heavy bodies pressed against him. A sharp, wet pain struck his tensed

arm. It stung briefly, then was gone.

He heard a voice from the fading whirl of images: "*Son! Son!*"

"Easy, Mr. White. He seems to be coming out of it."

"Doctor, will he . . .?"

"There is no way of telling. We know so very little . . ."

"But you did give him the drug, didn't you?"

"Yes, we gave him neodemerol. But its action is still uncertain, particularly upon the conscious mind. I urge you . . ."

Phil stirred. The voices became tangible things, each producing a separate picture. It was very difficult to unite them.

"Dad, is that you?"

"Yes, son."

Very gradually he was able to resolve a double blurr before his eyes. One of them was his father . . . The thought carried pain. There was something he must do . . .

"Dad! Stephen Clary—is he . . . all right?"

"Yes, son. He is all right. And so are you, *now*."

After that his vision cleared quickly. Somehow the sense of urgency was gone. Stephen Clary—thank God!

The other man, the doctor, moved forward and bent over him.

"How do you feel, Philip? Can you understand me clearly?"

"Yes, sir."

"Then listen to me very carefully. *I want you to tell me what you last remember before waking up just now.*"

Phil stared up at the middle-aged man. He tried to repeat the question in his mind. The blood pounded at his temples. His breath quickened. His vision wavered . . .

"I . . ."

"Try, boy, *try!*" snapped the man. "Tell me what you last remember before being here."

"I remember . . ." What was the question now? What had the man asked?

"Doctor . . ." began his father.

"I . . . I remember . . . Stephen . . . *candy* . . . I gave him some candy."

"*Candy?* Was it really candy, Philip?"

"I . . . *no.* No, it was . . . something else . . . *poison!*"

The two men visibly relaxed, breaking into smiles.

"Doctor!" cried Phil's father. "He can do it!"

"Yes," said the man. Then, staring at the boy once more, he said: "You are going to be all right, my boy. You're safe. Nobody can hurt you—or make you do anything you don't want to do—ever again."

He straightened up and looked at the father. For a moment both were still. A silent message seemed to pass between them. "I must go to Stephen now, Mr. White. Phil may leave here whenever he likes."

"Dad . . ." said the boy, when the door had closed. "Dad, you . . . know, don't you? You were in Stephen's room . . ."

"Yes, son. I know. But don't talk now unless you want to."

"*I've got to, dad.* I've got to while I can—they gave me some kind of drug, didn't they? That's why I can talk . . . about why I came here to see Stephen."

"Yes."

"There's more, dad. Much more. You've got to know—everybody has to know. Terra—the world is . . ."

But his father interrupted him. "Yes. I know all about that, all that you know. You've been unconscious for two days. The doctor gave you deep narcotherapy while you were asleep."

Phil heaved a deep sigh. "I'm glad, so glad. I couldn't go on—knowing that . . . not being able to do anything about it . . . not being able to tell you . . . But how did they catch me, dad? It was *you*, wasn't it? You found out. But how? You aren't . . ?"

"No, I'm not like you and Stephen. But I did know that something was wrong. Something terrible, but something you couldn't do anything about. There was a series of incidents . . ."

"My staying out late at night . . ."

"Partly that. But there was more." His father frowned. "At first I thought it was me, son. My fault. I thought I was failing you when you needed me . . ."

"Oh, dad . . . *dad* . . ."

"I did everything I could think of to get close to you, to gain your confidence . . ."

"The telescope—Dad, I *wanted* that telescope . . ."

". . . and then you did something that told me you were under some kind of influence. *You lied to me.* Believe me, son, I wasn't trying to trip you up. But when you said that you wanted to go to Gregory's house that night—that he had invited you to see his telescope—I knew you were lying. Lying because, somehow, you had to lie and not because you wanted to.

"You see, what you didn't know—couldn't have, for all of your intellect—was that Bill Simpson and I had already begun work on your scope. I was going to surprise you, son. He and I and Gregory had already rejected the little scope Bill had made for Greg.

"So I followed you. I'm almost ashamed to admit it, even now—but I had to know what it was. I nearly turned back when you actually did go to Gregory's house. But I waited outside for a while.

"Sure enough, you came out and headed down the tracks—where I had seen you go once before. I followed you to the old railroad shed. I listened at the window . . . until I had heard enough . . ."

"Dad," interjected the boy. "You might have been killed! They would have killed you . . . I . . ."

"I had to know, son. It was the hardest thing I ever did, except for one thing: setting the trap for you here at the hospital. We heard everything you two said. We allowed the nurse to be tricked away. We listened through a hidden microphone until you . . ."

Phil closed his eyes in pain at the thought. "I almost went through with it, dad. I couldn't help myself . . ."

"I know. There was nothing you could do but obey the order. But what you actually tried to do—remove yourself from the gang—required almost impossibly heroic strength."

"Dad . . . you know . . . that I . . ."

"Yes, son. I know that, too. I know that only your body is related to me—to Terra. I know that, somehow, I am

not really your father . . ."

"Oh, dad . . ." sobbed the boy, tears streaming down his face. "I . . . I do so much want . . . you . . . mother . . . I . . ."

His father bent down and put an arm around him, patting his shoulder gently. "It doesn't matter, Phil. You *are* my son whatever has happened to you. We want you with us . . . We want you!"

Suddenly the boy tensed. "But . . . I'm *alien!* My mind . . . as soon as the drug wears off I'll be . . . Oh, dad . . ."

"Phil . . ."

But the boy went on. "*Those who are coming!* They're powerful, dad. Terra may have to fight them . . ."

"Perhaps we will be able to cope with them . . ."

"But how can you *know?* They represent an alien environment, an alien culture . . . they may decide to exploit Terra! You don't *know* what to expect, or when, or how . . ."

"What do you suggest, son?"

"*Dad, you've got to let me go back to the gang!* I'm your only contact with *Them.* Keep me under drugs—anything you can. *But you'll have to let me go back to them!*"

His father smiled, very slightly. "We were hoping you would say that. Yes, it is the only way. If *those who are coming* were enough like us to be friendly they wouldn't have chosen to prepare the way for themselves like this. You're right, son. But it had to come from you. We'll announce that Stephen Clary died of a brain disease. Then we'll send him back to New York with his father—where no one will ever know about it. I don't believe the gang can ever find out that you didn't carry out your order."

He paused, a far-away look in his eye. "Yes, your idea is sound. I don't know what we'd have done if you hadn't suggested it. Everyone agreed that it had to be entirely voluntary . . .

"Strange, isn't it—the best weapon we have against the aliens is *one of their own products whom we've helped learn to think for himself!*"

FICTION BOOKS

Many people have tried to wed the detective story and science fiction—with results that, shall we say, do not please fandom. This is not the case with *The White Widows* by Sam Merwin, Jr., but that is what one would expect from this author. The book, published by Doubleday at $2.95, is a thrilling, fast, intelligent novel of war between the sexes—on a genetic plane to begin with and then right back to old-fashioned assassination. The white widows are carriers of hæmophilia, who hope to take over the world and turn it into a matriarchy. The hero, quite coincidentally, discovers that such carriers are in many respects superior to ordinary mortals. From then on he is in trouble that mounts right up to the end of the book. Of course, it all comes out all right in the end—which from some points of view is a pity. Still, it's a highly entertaining book.

Similarly, a blend of detective and science fiction in a manner that could hardly fail to please is *The Demolished Man* by Alfred Bester. This has been published over here by Sidgwick and Jackson at 9s. 6d. It was voted as the most outstanding science fiction novel of the year by American fandom at the so-called Eleventh World Science Fiction Convention. This may seem rather an odd thing at first sight, but one has to remember that these were American fans and they'd probably not even considered any British books. It is certainly *not* the best science fiction book of the year, though it stands in line with several others that are at the top of the shelf and can be quite confidently recommended to those who haven't read it in magazine form. It's the kind of book you find difficult to put down—even *after* you've read it. Here we have a society of the future in which there is a proportion of telepaths. Murder is committed, for which the penalty is demolition, and the body of the book is concerned with the un-

earthing of manner and motive, utilising telepathic powers on both sides. Naturally, crime does not pay; not for long, anyway.

Weidenfeld and Nicholson have added to what they call their science fiction "shelf" the collection of stories selected by the Jules Verne Prize Committee as those which most deserve to be preserved in book form. *Prize Stories of Space and Time* is said to have been edited by Donald Wollheim, and it's rather difficult to see what this means. The twelve stories in this volume were selected by Forrest J. Ackerman, Otto v. St. Whitelock and Donald Wollheim. They had already been published in some of the best American magazines, so what did Wollheim edit? Certainly he wrote an introduction, but we feel the other members' names should have appeared on this book. Anyway, there is nothing to be said about the stories, except that they are of a very high quality. The book costs 10s. 6d., and that is too much. These little books are getting more and more costly over a very short period. Time that ceased.

Grayson and Grayson are in there pitching again with the third series of *The Best Science Fiction Stories*, at 9s. 6d. Of course, they are nothing of the sort, but we can't blame Graysons for that; the stories were originally selected by E. F. Bleiler and T. E. Dikty, so any criticisms about choice should be levelled at *them*. The book contains sixteen stories, some by household-name authors and some by people we've never heard of. Temple, Phillips and Christopher represent Britain. Some of these stories, we feel, have no right to be published in a book of this title. *Extending the Holdings*, by David Grinnell, is one such—and this even made the cover painting! Perhaps it's just as well there won't be any more of this series if the quality is going to drop like this. This anthology is not up to Graysons' high standard, we think. Maybe the next one will be better.

Another American novel that we can guarantee as good reading is *The Syndic* by C. M. Kornbluth, author of that other high-quality book, *Takeoff*. In a sense, this is an adventure story pure and simple. The background is certainly authentic science fiction, and is very startling in some of its aspects. The characters are very nearly real people and they almost talk as they would in real life. The plot is intriguing and expertly worked out. It's a pity that the front of the book is a bit disjointed, but as soon as you get past that it is plain sailing all the way along the story's fast and enthralling trail. One of the best books of the year.

NON-FICTION BOOKS

Perhaps the most interesting and controversial title that Britain has seen for some years is *The Flying Saucers Have Landed* by Desmond Leslie and George Adamski (Werner Laurie, 12s. 6d.), in which it is claimed that a ship from Venus came down in the gullies of the Mojave Desert and let out a Venusian who spoke in sign language and by telepathy to Adamski. This appears in the latter portion of the book. At the front is Desmond Leslie's very scholarly account of flying saucer phenomena, for which he examined just about all there is that is even remotely connected with the subject. He goes back to legends in Sanskrit, in Celtic prehistory, in Atlantis, and before the flood.

Though many will scoff at the ideas in this book, there can be little doubt that both of the authors are sincere in their beliefs, and that each of them has put everything he has got into this volume. The photographs, especially, will come in for a good deal of criticism, and perhaps with justification. Though there is no logical reason to doubt their authenticity, it would be a very simple matter to produce photographs exactly similar to them, just by rigging up a few props and being careful about the lighting.

But let's be scientific about this. Because a thing seems strange is no reason why it should not also be true. Because a thing has no explanation offered does not mean that the thing is imaginary; there are many well-accepted facts that scientists are quite unable to explain—simple things like how an elver finds its way across thousands of miles of ocean to the river where its parents lived. Flying saucers may come into that category.

Because of this we should not refuse to believe in them; there is no proof that they do not exist. But equally, we must not come to think that this book proves their existence. It is simply a highly readable and laudable contribution to the study of the subject. It is a book that should have been written. It is a book that puts all others on this topic in the shade. It is a book that should be read, with an open mind, by anyone who ever intends to say anything about flying saucers.

Staying on the same level—the sky—but coming down to concrete, observable facts, *The Sky and*

Heavens by Peter Hood (Penguin, 2s. 6d.) is a splendid introduction to astronomy and sky phenomena. Meant for intelligent children, the booklet is quite suitable for the uninformed adult, and covers the aurora, thunderstorms, sunspots, eclipses, constellations, stars, moons, comets and planets. Several very good star maps are included and these alone are worth the half-crown. The booklet is chock full of coloured illustrations.

A little book called *Hypnosis and Space Travel* has been issued privately by Bruce Copen, the well-known hypnotist and radiesthetist, at 1s. 9d. from 21 Over Street, Brighton 1, Sussex. This contains a great deal about hypnotism and not very much about space travel. The main argument seems to be that anyone who intends to fly in a spaceship can have his task made easier by pre-treatment with hypnosis. We would be the last to deny this, and we hope that serious thought will be given to it by the persons concerned. Meantime, this booklet is cheap and interesting.

Space Travel—When and How? is the title of a booklet that contains the results of a poll conducted among personalities in science and science fiction (including the editor of this magazine). It is published by Gerry de la Ree, 277 Howland Avenue, River Edge, New Jersey, U.S.A., and has within it the considered views of sixty-five contributors on such questions as when will a rocket reach the moon? What fuel will it use? Which country will do it? And so on. Mr. de la Ree puts no price on the pamphlet, so applications should be addressed to him direct.

Miss D. Ponton of 11 Churchfield Road, Poole, Dorset, has put out a volume titled *How Letters and Numbers Began*. It costs 6s. It appears to be designed for children, and tells the story of the alphabet and numbers in a fictional way. To our minds this is quite unsuitable for children because the story just is not true. It follows the thread of real history, but dresses it up in a dramatic fashion, no doubt to make it more appealing, and is certain to give children a most confused and erroneous idea of the long and laborious trail that leads to present-day scripts and mathematics. In teaching children the origin of things, there is no need to bring in magicians and talking ducks as this author does.

That classic volume, *A Textbook of Botany for Students*, by Amy F. M. Johnson, has been reprinted yet again by Allman at 15s., the frequent reprintings attesting to its popularity. No other botany book is quite like this one; no other covers such a wide field so well; no other has the wealth of illustrations and diagrams. It is meant for

the Intermediate stage and can be confidently recommended to all who take plant life seriously.

For those who, like this reviewer, were never taught mathematics properly and who are not too nimble with figures but want to be—for these, there is now a "way out" in the form of a four-part book called *Daily Life Mathematics* by P. F. Burns (Ginn, Part 1, 9s. 3d.; Part 2, 8s.; Part 3, 7s. 6d.; Part 4, 8s. 6d.; Answers, 1s. 6d. each Part). These four splendidly bound, profusely illustrated Parts form a complete course in the kind of mathematics that is really useful to the active mind. Everything is slanted at real things, things that the student can see around him. Gone are the ridiculous tanks that have three taps letting in water while a hole in the bottom lets it out. Gone are the quaint geometrical figures that exist only in the pedagogue's mind. Here we have a minor revolution in the teaching of mathematics. Learning it this way is fun. Do please buy these books if you are at all afraid of the subject. Your fear will vanish like the tanks and you will come to friendly terms with figures.

New Biology No. 15, the Penguin bi-annual publication that costs only 2s., contains articles on Animal Populations (by J. B. S. Haldane), The Coconut (by R. Child), some results of Bird Ringing (R. Perry), Seeing's Believing (a *most* illuminating article by M. L. Johnson), The Dogfish (by J. E. Harris), Chlorella (by G. E. Fogg), and the Origin of Biological Pattern (by C. H. Waddington), These are all written for the intelligent layman and form part of the policy of this publication of keeping ordinary people informed of the latest developments in biological science. A good two bob's worth.

In the fine tradition of Sidgwick and Jackson's reprints of *Collier's* space features, *Man on the Moon* is a beautiful production, more than five times longer than the original feature, lavishly illustrated with beautiful paintings, and with a brilliant text that covers all aspects involved in the title. Even at the rather high price of 25s. this is a book to be bought by every one of our readers—and studied with great care. It is written by experts, illustrated by masters. Get it.

Projectiles

★★★ *STAR LETTER* ★★★

Thank you for the last *Authentic*, which I received last Saturday. Enclosed is a P.O. for same. Comments: *The Tree* and *Planet of Change* are nice little tales, for which I have no criticism—save that I am surprised that John Christopher's heroes (or he himself) never read far enough in *Through the Looking Glass* to read Humpty Dumpty's description of a rath and a borogrove! *Lone Wolf*—now this story really shook me, probably because I identified myself with the hero to an unaccustomed extent, since, as I read it, it struck me most forcibly that the description of Delmar could stand for my own personality. Thus it was something of a shock to come to the end to find that the author was unsympathetic to his hero and his like. (I have an idea that, had John Christopher been writing the story, *he* would not have been so.) *Loneliest World*—the story wasn't bad but . . . You can't have an outpost to the Universe, since every point in the Universe is on the "outside." From the three-dimensional point of view, the Universe is infinite; only with a four-dimensional vantage can the limits be perceived; similarly, to leave the Universe, one must be elevated to a four-dimensional plane of reference, and it is impossible to leave it merely by flying out of it—any more than you can point your car at the Moon and expect to get there by driving straight ahead. In addition, in view of the time it would take humanity to expand over the whole vast Universe, the characters were excessively twentieth century. I've noticed that few authors seem to have a sense of historical proportion and astronomical proportion together. *My Name is Ozymandias* is a change from the type of novel we've been having lately. It was an enjoyable piece, and I have no grumbles—which is praise! By the way, can you tell me where the poem originates from which Jordan took his title? I've known that quote for years and am still no wiser as to the source. All the best to yourself and to the magazine.

Paul L. Sowerby, 21 Lansdowne Road, West Didsbury, Manchester, 20.

A nice letter, Paul—and we send you six non-fiction technical books in appreciation. You've given us all something to think about with your remarks on the Universe. Jordan's title comes from a poem by Percy Bysshe Shelley called Ozymandias. *It's first line is 'I met a traveller from an antique land.' You can find it in the* Albatross Book of Living Verse, *edited by Louis Untermeyer, published by Collins.*

GREEK CLUB v. BERRY

As for Bryan Berry, I'm under the certainty that he is trying to make a new Ray Bradbury, instead of a writer, out of himself, and not with any success in any of the two fields. Although I read his *The Tree* three times and your editorial said just two, I still believe that it's no good. No good at all. The first part, in italics, for instance, was entirely out of space and time and should have been out of the magazine too. Better authors have accustomed us to expect something extraordinary out of those parts in italics. Something that would fill us with expectation, something eerie, something abstract which is to be immediately contrasted by the paragraph that follows. He tries to personalise the tree and puts into his—shall we say mouth? —a heap of assorted nonsense. For example: *Leaves are my hair and they blow in the swift breath winds. Branches are my cloak when it is cold.* Apart from the fact that I can't understand what *swift breath winds* means—anyway I don't have perfect English—I must say that this piece was written by a simple-minded person and intended for readers with a similar I.Q. to his own. Does Mr. Berry mean to imply that a tree with telepathic powers needs blankets and pillows? And what does this hair business mean? Is this tree of his so much in love with humanity that it has to compare the hairy covers of the latter's head with its leaves? And, if so, what in Heaven has this to do with our story?

But let us turn to another point—Mr. Berry claims (p.16) that *sanity is peace and an acceptance of peace; it's understanding that we're no more important than the grass we walk on.* Well, let me tell him that this is not sanity; it's lunacy—sheer, plain, old-fashioned lunacy. Just suppose that Cromagnon man had found out that particular definition for peace. Where would we be now? But he didn't. He thought he was superior to his environment and proved that it was so. And he didn't prove it by peace. He proved it by cracking the skulls of tigers. He was crazy, in Berrian standards, but thanks to him we are alive today. It is true that we are far from perfect, but some day will be even that. The human race has to feel that it's important, far more important than anything—let alone grass. Because from the moment it started feeling humble it would disappear. We must feel that although we are not the Lords of Creation, there isn't any reason why we shouldn't be. Far more important than sitting down and looking at trees or sympathising with grasses. And as long as this holds true, stories like *The Tree* would have been better kept out.

Basil P. Coukis, President, Athenian Science Fiction Club,
45 Charilaou Trikoupi Street,
Athens, Greece.

Oh, Basil, you have so much to learn! Can you not see that only man needs *blankets and pillows—that the tree* has *them? Can you not see*

that because Cromagnon man smashed the skulls of tigers, we today smash the lives of millions of men and women? Don't you know that man has never *proved his superiority, only claimed it? And do you really believe that man will reach* perfection*—that he could be the Lord of Creation? Do we* have *to fight and kill and destroy to find our destiny? Can we not believe that we are of no special importance and come to peaceful, sane terms with the universe around us? Is humility such a terrible thing that you rant and rave rather than acquire it? Why are you so* afraid *to be humble, Basil? Why haven't you the* courage *to work in peace?*

AUSSIES

Recently received No. 34 and am very pleased with it—quite up to scratch. The regular features are good; they provide just that little spice that turns a good mag into a top-notcher — and that's what you've got. Keep it up!

P. R. Jefferson, 41 Mary Street, Lonueville, Sydney, Australia.

For the first time in my life of reading science fiction—some 15 years—I am breaking an ironclad rule by writing to an editor. Naturally, this has taken a great stirring of mind, and that stirring has been occasioned by the changes in your magazine... Issue 31 arrived. I can only describe this story as utter rubbish. Garbage fit for the publishers of true romances and similar tripe . . . Then, the climax—No. 32. Never in the most barren years of sf have I read such garbage. No relf-respecting juvenile magazine would print it. Not even the worst westerns would consider it. I knew the rot had set in. I am disappointed and disgusted. I thought better of you. And now I take my leave—for ever.

J. R. Elder, 25, Victoria Pde., Manly, N.S.W., Australia.

Oh, dear! No patience. No understanding. Pity.

FINE BOOK

I would like to do two things at once. First is to congratulate you on a fine book; I've enjoyed every copy. Second, could you send me the address of Wilmot Mansour and Co.? Please send the address by post as I may miss the issue you print the reply in.

H. M. Robinson, 384 Main Road, Escombe, Natal, South Africa.

Thanks a lot. Nice to hear from you out there. The address of the model spaceship makers has been sent to you. Write again.

PURSEBOOK

I want to take this opportunity to tell you how much I enjoy your magazine. And I want to disagree with one of your readers. He didn't like the cover of *The Rose*. In my opinion he doesn't know the meaning of symbolism. A more "Authentic" illustration for the story couldn't have been drawn. All in all I can find no complaints with *Authentic*. I receive several British sf publications through a friend in England and *Authentic* is my favourite—it fits into my purse perfectly! I also like its stories—and its *covers*.

Wanda Baker, 2125 N. Clark, Chicago 14, Illinois.

It gives us a great kick, Wanda, to know that our words are being carried around Chicago in your

purse! And when you read us during your lunch hour, pop us a bite of hamburger, will you? Thanks for writing. Do it again.

BARGAIN!

I have *Authentics* Nos. 1 to 36 in good condition, for sale at 9d. each. State what issues you want and enclose stamped addressed post card for reply.

S. Wylie, 53, Herries Road,
Glasgow, S.1.

CONVERT

I have not been a regular reader of *Authentic* up to now, as I have not cared greatly for the type of stories presented in your magazine. I purchased one of the early issues and was disappointed to find the stories crude and lacking in originality; nor did I like the sensationally gaudy covers. However, I recently encountered *Authentic* in its present form and, being attracted by the much more adult appearance of its cover, I purchased a copy. After having read it through I can say at once that you have made considerable progress towards equalling the best of your contemporaries. The idea of a series of covers illustrating the conquest of space is highly commendable and should convert many casual readers into regulars, myself included.

J. E. Board, 1, Foxbury Avenue,
Porchester, Hants.

Glad you've re-assessed us, Mr. Board. And keep watching. We haven't stopped improving, yet. Let's have your opinions on this issue, please.

NEOFAN?

I have seen a piece of information in your *Authentic* regarding a newspaper called *Fantasy Times*, published in America by J. V. Taurasi at Fandom House, 32nd Avenue, Flushing 54, N.Y. I would be grateful if you could send me any information regarding the purchase of *Fantasy Times* in this country. Also I would like to know if there is a science fiction club in the region of Bournemouth, my home town.

R.E.M. 1 (A) Hurst, N. H. J.,
L/FX 893707, Station Flight,
Theseus Mess, R.N.A.S.,
Yeovilton, Somerset.

We suggest you write to Taurasi, Mr. Hurst. We believe there is a system of magazine exchange in lieu of subscription. And there is a very thriving club down at Bournemouth, with a fantasy art society, too. The address is, Alan Hunter, 124, Belle Vue Road, Southbourne, Bournemouth. For younger fans there is also the Galilean Society, Shirley Marriott, 59, Cardigan Road, Winton, Bournemouth.

ODOUR

I've read your magazine ever since the first issue. Some of the stories have been good, some bad, but two of your stories stink. If they can't do better than that, you'd better get rid of them. The two stories were *The Piper* and *The Shining Ark*. The first one stinks because all the author's done is taken a child's fairy story called the Pied Piper of Hamelin and put a bit of science fiction on to it. The other one stinks because all the author's done is turned the story of Noah and his ark and the flood into a science fiction story. Every

story was okay, except for these two.

L. Drew, 12 Anglesea Road, Woolwich, London, S.E.18.

Sorry you didn't like those stories, Mr. Drew. Actually, we had *heard the stories of the Pied Piper and of Noah! Still, glad you liked the others.*

COVERS

Congratulations on the new style cover. They play an important part where science fiction is concerned and there are many science fiction magazines and books on sale just now whose covers are, to say the least, in appalling taste. So keep yours as it is. It's just the job. I'm no authority on art, but it does seem to me that the interior illustrations are a bit on the gloomy side—too grim, somehow; after all, some science fiction stories have their lighter moments. So what about it?

Norman Lamont, 131 Ann Street, Dundee, Angus.

Covers are *good, aren't they—even if we* do *say it ourselves! For some time we've been a bit worried about the interior illustrations, and we've started a drive for better ones. What do you think of those in this issue? This question is addressed to all readers; we really want your opinion on the various styles of drawing we've been trying.*

OFFER

I have on my hands something like 150 different science fiction and fantasy books, which my wife says I'm cluttering up the drawers with. I'd like to give them away to some unfortunate *Authentic* reader, sick or invalid, to make a few hours of enjoyable sunshine. Contact me at this address and I'll send a wopping big parcel.

James Pentland, 58 North Avenue, New Washington, Co. Durham.

That's mighty fine of you, James, and we're proud to have a person with such sentiments among our readers. We'd suggest that 150 *books is rather a lot for one person, so why don't our other readers write to you with the names and addresses of infirm friends? For our part, we'd suggest that you send a consignment to one of our lady readers who is not doing too well: Mrs. J. Childs, Staffordshire General Infirmary, Foregate Street, Stafford. And thanks again, James.*

FROM EARTH TO THE STARS!

AUTHENTIC covers take you step by step from the first manned rocket to man's final conquest of interstellar space. Accurate, scientific, exciting! This is the way it will happen!

THIS MONTH'S COVER

is the seventh in our new series of documentary paintings and depicts the scene of man's first landing beyond the Moon. Here the dumbell, space-to-space vessel, has been brought down on Phobos, one of Mars' satellites. Phobos has no atmosphere, and its gravity surface is very low so that there is little risk in landing a space-to-space vessel on its rocky terrain.

From Phobos, the space explorers can make preliminary observations of Mars, the mother planet, confirming or modifying the results of investigations made from Earth and from the artificial satellite. In this way, the main landing, which will be made from small winged ships released from the anterior sphere, can be planned with the utmost safety and in as complete knowledge as possible of the conditions to be expected on the red planet Mars.

Well out from Earth now, our story moves on to the founding of the first human extraterrestrial colony. Man cannot spread out through space without a continuous line of supply and communication behind him. In order that he may push onwards to the stars, man must have a base on Mars. Next month our cover will show in authentic detail the beginnings of such a base.